J. P. BETTON

Thos. Forrest Betton.

John P. Detton

taken in 1808-9

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John P. Detton

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1st Lancet with a
Iron handle - to prevent fingers
the handle

a - Respiratory
fumigator

2 - tubulous ~~outer~~ pair to use
to ~~use~~ the Throat the handle
3a. Nasal - to clean the teeth
4 tooth pick to examine the
fissures

5 an Elevator
forceps use less

6 lenticular to cut off frequent
nerves

7 two Nerves

Notes
of the
Lectures

Lectures on Surgery
delivered
by
Philip S. Physick
in the
University of Pennsylvania

Lecture 1st of Inflamation

There is perhaps nothing more necessary to the surgeon than the principles of inflamation. For as there is a certain degree of it necessary to restore diseased parts to their healthy state; so there are likewise other grades which are incapable of performing this restoration. Of course then a knowledge of its principles, and also of the appearances which it has in performing the restoration of diseased parts is absolutely necessary for the surgeon. — The term inflamation was given to this process from a supposition of an accumulation of the part inflamed — Tho' this idea is altogether incorrect yet the term answers well enough to express our idea of that particular operation It may be either connected with another disease or not: An instance of the former we see in scrofula syphalis &c. Frequently improper treatment is the result of ignorance of the symptoms which a violent inflamation leaves behind it — For instance I knew an instance of a sprained ankle which after the inflamation abated was very weak. Medical assistance was called and the Physician prescribed same remedies which threw the patient into a hectic fever. — An

An inflamed part performs its functions with difficulty.— An instance of this we see in the eye which when violently inflamed looses the power of vision.— Inflamation is either healthy or diseased; and is divided into three kinds viz, adhesive, Suppurative, and ulcerative.— I shale only treat of the healthy kind in this lecture.— Inflamation is not necessarily a disease; because disease always tends to the destruction of a part; but inflamation is sometimes necessary for its restoration. In the healthy state it is a pale red colour, accompanied with a preternatural sensation, and if seated in the skin very often preceded by itching, heat and a dull throbing seem accompanying it.— Redness is never a disease, tho' it is often the predisposing cause of it.— The causes of inflamation, are Chemical and Mechanical or fever.— To the first belong heat, cold, and substances caustic &c.— To the second, wounds, bruises, &c. Inflamation does not always immediately follow its cause. A cause that will at one time excite inflamation of one kind will at another in the same constitution excite a different one. Different remote causes have been supposed to produce different kinds of inflamation but I think the variety is owing to the difference in the situation of the affected part.— For the same remote cause will produce Erysipelas in the face, and common inflamation in other parts.— Fever is sometimes the remote cause as in critical abcess.— Inflamma

tion

tion depends greatly upon habit. e.g. a person unaccustomed to work will blister very soon, and a person unaccustomed to a high degree of heat will bear much less without injury than one daily exposed to it. If suppuration follows inflammation, it is termed critical abscess. The healthy kinds of inflamation are adhesive & suppurative. Adhesive inflammation is an increased action of the vessels causing an extravasation of coagulating lymph. It begins in the small vessels and spreads from a point in which (for the most part) it begins over a larger surface and is always greatest at the point in which it begins. Suppurative inflammation is an increased action of the vessels secreting pus. In adhesive inflammation the matter which forms the union is coagulating lymph. The red Globules are thrown out likewise, but are again absorbed. When inflammation supervens in a particular part, that part receives a more copious flow of Blood thro' it than a healthy part, in consequence of the increased action of the blood vessels. That there is an increased action of the blood vessels is proven, by the part being of a pale red. If there was a decreased action it would be of a purple colour. The diameters of the vessels are likewise increased which is proven by Dr Hunters experiments on the ear of a rabbit. The swelling in inflammation arises both from the thickening of the coats of the vessels & from the extravasation of lymph.

The

The swelling is greatest at the point where inflammation commences. The pain is produced by the spasm or convulsion of the vessels much in the same manner as it is produced in cramp or tetanus; or by distension. When inflammation precedes gangrene, it is of a purple colour. The heat of an inflamed part is considerably increased but never rises higher than the source of circulation. The lymph secreted in adhesive inflammation becomes in time vascular, and may be injected. Mr Hunter proved that coagulating lymph was thrown out by observing that the matter found on the surface of inflamed cavities, corresponded in every particular with the lymph of the blood, when divested of serum & globules. The coagulating lymph is changed in passing thro' the vessels: for if it be thrown out on the internal surface of a vein it refuses to mix with the circulating mass. The effect of adhesive inflammation on the constitution varies according to the degree of violence, & the part affected. It is attended with little inconvenience when seated in the skin; but in the theca of a tendon or periosteum it occasions great pain, producing symtomatic fever. If the inflamation be great the pulse is quick and full, blood drawn is sizy. This inflammation often terminates spontaneously, in which case it is termed spontaneous resolution. A man of 36 years of age received a bruise of the leg by the fall of a bar of iron on it six days before inflammation came on. I was called to see him. His Body was all in a tremor, his extremities were cold

and

and clammy, his pulse small & quick; he was cured by a dose of laudanum and the application of it to the part affected. I have seen death in this case induced by inflammation of lacerated wounds of the joints. Tumors frequently occur in the breasts of women and likewise they occur in the throat called schirrus tonsils, and are produced by the effect of simple inflamation, occasioned by the lymph not being absorbed, when the inflammatory action ceases. This takes place in glandular swellings and forms what is called a schirrus tumour. By this it appears that there is no cancerous tendancy in the blood. Inflammation terminates also by an effusion of serum. If there be a secretion of any fluid, from the part inflamed the inflammation does not run so high. Blisters that run well are less painfull, and much more easily cured than those which do not. It is highly probable that inflammation of the brain terminates by forming what is called hydrocephalus internus; and if the chest by forming hydrothorax. Local inflamations are frequently removed by fever. Hemorrhagy sometimes terminates inflammation. A remarkable instance of inflammation of the eye, which had resisted bloodletting and other remedies was cured by the accidental breaking of an artery of the eye-lid which bled considerably. I have seen an incurable case of fistula in ano, from not bleeding in the inflammatory state. If inflammation be not stopped by some of these means it proceeds to suppuration. When inflammation arises from accident, and proceeds too far we should not attempt

resolution

resolution; otherwise be aught by all means in our power. But there are cases in which it should not be attempted. 1st in very warm weather, lest be induce tetanus. A generous diet and cordial drink should rather be recomended. 2nd If occasioned by a constitutional affection as fever. 3rd If it be owing to the removal of any worse disease. Some inflammation is necessary for the restoration of a part. Treatment. — To affect a cure in the first place, the remote cause should be removed. 2nd The inflammatory action should be reduced, that the part may take on a natural one. This is affected by two kinds of remedies viz constitutional & Local. The constitutional are, low diet, bleeding, purging, neutral salts, antimonials, diluents, tamarine water &c &c. And first low diet. — This tends to empty the blood vessels. 2d Blood letting. This is the most powerful remedy in inflammation, since inflamed vessels are under the necessity of contracting, to adapt themselves to the column of Blood; and as contraction is a very different action from inflammation, it allows the parts to take on a natural action, by diverting them from the inflamatory one. Blood letting acts in two ways, 1st it removes the ~~stimulus~~ of of distension by lessening the impetus of the Blood: and 2d by lessening the violence of the blood itself. 3rd Purging. This another remedy for inflammation, tho' we are sometime obliged to decline it on account of its attending inconveniences. It acts probably by lessening the action of the vessels, except when they produce Nausea,

then

" If the Inflammation is seated on the Leg or arm elevating them it acts in two ways 1st " it retards the flow of Blood thro' the Arteries and 2d " it facilitates it thro' the veins —

then they act sympathetically. Nitre, Sal. amoniac, & Sal Glaubere have been advised, and antimonials have sometimes been joined with them. Mercury often acts powerfully in the cure of inflamations. 4th Rest. This is highly serviceable; the whole body should be kept quite still & the room should be kept of a moderate temperature. The Local remedies are 1st bleeding by scarification, cups & by leeches. If a fever be caused by inflammation, general blood letting should always be premised. 2d Cold, this should only be used when the heat of the part is disagreeable, and should never be carried so far as to become disagreeable to the Patient, or else it proves injurious by acting as a stimulus. 3rd Vinegar, Sal ammoniac and the preparations of lead are often imployed, likewise laudanum 4th Poultices. These are either simple, or medicated, simple, as bread and milch the Flax-seed Poultice, and the medicated are the simple Poultices mixed with medicine. 5th Blisters, these are of very great use applied directly to the inflamed part or in its vacinity. They produce resolution by the evacuation of serum. Blisters are of use applied to the inflamed part, when we are apprehensive of tetanus. They should be used when we are fearful of great evacuation. Of the good effects of [illegible]ive inflamation, they are instanced in 1st the healing of wounds, 2d in abcess, The cells of the contiguous cellular membrane, are united by it which prevents the pus from escaping from the cavity of

of the abcess, and so stops the further progress of inflammation

3 ly Cysts are formed for the lodgments of extraneous bodies, as Balls, shot &c. I was surprised at the tenacity with which they are held in these cysts, when I attempted to extract some shot lodged just under the skin. — 4 ly In abcesses of the liver or any viscus the pus in its passage to the surface of the body is prevented from being effused into the cavity of the abdomen, by the adhesion of the affected part of the viscus, to the parietes of the abdomen or cavity

Lecture 9th

Of Suppurative Inflammation

We come now to speak of Inflammation suppurative. — If inflammation be not stopped by some of the means above mentioned it proceeds to suppuration. Here the inflamation acts by secreting pus, and the suppuration which takes place is a third remedy or mode of Cure. The contact of air to internal surfaces has been supposed to produce inflammation — I once heard a professor say that he thought the action of the air occasioned inflammation of the chest, in a case where the pleura had been punctuated with a red hot iron. — Notwithstanding the violence of the act he imputed the inflammation to the action of the air. — I once tryed an experiment on a kitten in this manner —

I made an incision thro' the pleura thro' this orifice I passed a tube, and filled one side of the chest with air. I then withdrew the tube & closed up the wound. In that situation it remained three days without any remarkable alteration. The Kitten was then suffocated and upon examination no perceptable difference could be observed between the two sides. I mention this to show that the effects of air are not so noxious as is often supposed, and to prevent surgeons from hurrying too much in closing up a wound with a view of keeping the air from its internal. When adhesive inflammation will not admit of resolution, it goes on to the suppurative stage. This is characterized by an increase of pain, often attended with throbing or shooting; the swelling enlarges the parts become softer, and at length a fluctuation is felt, it is now what may be termed an abcess, a circumscribed tumor containing pus, abcesses are often attended with rigors, which are succeeded by fever and clammy sweats, which symtoms are removed by evacuating the pus. If the pain be very great it may be relieved by opium. This will be best effected by combining the opium with small doses of emetics. A Poultice of Bread and Milch is usually applyed to the tumor, in which a prominent part is observable; and an opening is in general naturally made, by the absorption of the parts beneath the skin. however an opening is sometimes made, by the skin & parts

beneath

" A Vicarious flush upon the cheek

beneath loging their life, and the parts sloughing away. Where this takes place it generally makes a pretty large opening. 1st If the time of this natural opening be protracted too long it becomes necessary to make an artificial one - Several circumstances require this opening to be made early. As 1st If the abcess be situated on the Thorax or Abdomen. 2nd If situated over any of the joints. 3rd If attended with great pain as in paronychia. - The pain in paronychia may be almost immediately removed by opium - In suppuration attended with Hectic fever, the constitution sympathises with the local irritation which the powers of the constitution are unable to overcome. as when the fever is brought on by ulcers affections of the tendons ligements or any of the vital parts. the symptoms of Hectic fever are great lassitude and weakness, loss of appetite, cold night sweats aptness to sweat on any little exertion the pulse small quick & frequent, urine high coloured, and deposits a copious sediment. It frequently terminates diarrhoea. The progress of suppuration sometimes suddenly stops, and the matter already formed is absorbed. It is a happy termination and of course a desirable thing to find medicine that will produce this effects. Accordingly many medicines have been imployed for this purpose. Emetics & Nauseating medicines have been known to produce this effect The matter formed in buboes has been absorbed by vomiting occasioned at sea - I have observed bleeding blistering and purging

to

to be of service. Hectic fever instead of being produced by suppuration as is commonly supposed is sometimes cured by its promotion. An instance of this occurred in amputation of the leg when the patient was afflicted with hectic fever, which ceased after the operation, when the surface and quantity of matter were increased. a convincing proof that hectic fever is not the consequence of the absorption of pus; moreover hectic fever has been cured by establishing issues which also increase the secretion of pus. I have seen cases where hectic fever proceeds from diseased joints even where no matter was formed; If suppuration proceed to fluctuation so that it may be distinctly felt the opening should be assisted by making an incision into the abcess. It is very customary to apply plasters of different kinds to assist in breaking the tumors containing the pus. such as resins saccharine substances &c. Rarely any of these do good tho that which is applied just preceding the eruption generally obtains the credit of accelerating the discharge. I believe they act merely by moistening the part. Blisters promote absorption by irritation Abcesses formed on the cranium should not be left to open of themselves and such as impede respiration should be immediately opened. The tonsils are sometimes so large as to impede respiration; they should always be opened under such circumstances if they contain pus. — Matter does not always absorb towards the skin i.e. in tumors containing pus, absorption does

does not always take place between it & the external surface of the body; but sometimes makes its way more internally; Hence the necessity of opening abcesses when they form over joints, or over any cavity. I knew a patient afflicted with a periodical pain in the head which afterwards was found owing to an abcess in the calf of the leg. Upon opening the tumor the pain ceased. I have twice seen all the symptoms of nervous fever produced by a small abcess near the abdominal ring. In the case the patient died owing to ignorance of the cause of the disease. In the second case the abcess was opened and the patient recovered. I have known another similar instance from one situated in the axilla. Abcesses which are situated on the face should be opened soon to prevent the scar, which otherwise would ensue, by leaving it to open spontaneously as it would absorb much more of the parts. There are two ways of opening abcesses. 1st by incision & 2nd by producing an eschar by means of caustic. The 1st should always be preferred, unless in cases where the timidity of the patient prevents it, in which case a thin layer of lapis septicus may be applied for the space of 8 or 10 minutes. The part it touches will soon slough off and give vent to the matter or pus. After the pus is discharged it is to be treated in the same manner as an ulcer. Pus is a light straw coloured substance of the consistance of cream containing a number of globules. It does not coagulate by heat if exposed to it but evaporates to dryness. It does not readily putrefy. It is specifically heavier than water, and is not easily miscible with it. It is not corrosive. It is said to be of a

mawkish

Mawkish taste. It is distinguishable from the other fluids of the body, by its containing globules of a peculiar colour which are suspended in a fluid coagulable only by Sal ammoniac, which is not the case with any other animal fluid. Mr Hunter observed that it is a secretion, the vessels taken on the nature of a gland and that the globules are not found till after it is thrown out of the vessels. Mr Hunter observed pus formed in 20 minutes after the application of a blister. Its time of appearance not uniform. When practicable suppuration should be obviated by resolution.—

Ulcerative Inflamation.

Ulceration takes place mostly after suppuration, and suppuration takes place after the extraction of dead ulceration. In Ulcerative inflammation a part is always lost; this is removed by absorption. It commences mostly after the suppurative stage; but has been known to precede it, as in some particular irritation or when sudden death of a part has taken place.— Pressure has produced this stage without suppuration. That part of the body ulcerates fastest which is nearest the surface. The absorption of parts in ulcers is always attended with inflammation and pain which is called soreness, but this is not a necessary symptom of ulceration for we find that scrophulous ulcers are not painful when they progress slowly; but when rapidly they are attended with great pain. I shall next say a few words on <u>abcesses</u> and first of

Mammary Abcesses.

Remarkable instances of Ulceration attended by inflammation occur in the Mammary

in the Q— in cellula subdolae
tuta & clausy fit Q femur excedit —

Mammary abcess of Women — These may either be seated in the glandular part or in the cellular membrane — It seldom occupies the whole breast. If a part of the glandular structure be diseased, the secretion of milch is commonly diminished; but if the whole of it is affected the secretion is suspended altogether — It is attended with shooting pains that extend to the axilla. If the abcess be seated in the cellular texture the secretion of milk is not not impeded — They are mostly preceded by a chilly fit, accompanied with pain of the affected part — There is sometimes more than one tumor felt — The time when this disease prevails, is the three or four months after delivery; tho' women are always subject to them while they continue to suckle — Those cases we seldom see till they have arrived at a considerable degree of soreness owing to the nurse supposing herself quite competent to the cure; tho' they always fail in their attempts — Altho' suppuration is mostly the result of inflammation of the breasts yet I have seen it terminate in oedema and the swelling be so great as to protrude the parts round the nipple so as to hide it — The swelling did not come on till after 10 days, and I was not called till after 6 weeks — When the adhesive inflammation takes place the coagulating lymph is sometimes thrown out without ever in absorbed after the inflammation has subsided — This forms an indurated gland or scherrus — I have seen them as large as a man's fist — These are no ways cancerous because they have yielded to the antiphlogistic regimen — The affections are frequently owing to mechanical violence, or tight dress and to a straining of the

Vessels

bosoms by too long retention of the milch. They are sometimes induced by the persons taking cold. In those cases where the glands are indurated they seldom return to their former size. Sometimes the glands are very much reduced in size and never after secrete milch. —

Treatment. If called in the forming state bleed according to the strength of the patient, exhibit a mercurial purge and put the patient upon a very strictly vegetable diet. The breast may be anointed with warm oil: if it be convenient for the patient to be confined to bed it should be done; if not support the breasts by passing a handkerchief around the neck. If the inflammation continue bleed may be repeated. The application of leaches to the part will be found of great utility. Bread & milch poultices with lead water are highly serviceable after the other evacuations have been premised if they do not give relief and the inflammation continue a blister should be applied. This is not so painful as might be supposed. Women who had not enjoyed rest for many nights, have been known to sleep soundly while it was operating. But be sure to keep up the evacuation per anum. A great variety of plasters have been used and are often recommended, but I believe they are all of doubtful efficacy. The application of sal ammoniac and vinegar is often advised, they are however of no use. Suppuration very seldom takes place if properly treated from the commencement of the disease. But sometimes from delay of calling in a Physician or from

of judgment, it does occur. If it becomes necessary to open the abscess, it is advised by some to do it freely, by making a large opening, but I have succeeded by making a puncture into the abscess, and introducing a bougie to keep it open, the bougie must be withdrawn occasionally to free it from the within collected pus. In the case of Odema, I applied sal Ammoniac, 1℥ more, ℞ to the part, and depleted generally by ℞ purging, but without any effect, the application removed the complaint. I removed an indurated gland attended with slow fever (the fever was cured by two ℞ and the antiphologistic regimen) by blistering and afterwards dressing with mercurial ointment, when the schirrus was as large as the fist. Mercurial ointment is good in resolving tumors. Weakness in the joint, especially in the hip without any apparent cause is generally a species of inflammation, which may be cured if taken in time, by purging every other day, with Jalap ℞ cream tartar, for three months, low diet ℞ frequent bath of salt ℞ water. Swellings are occasioned, by a secretion or throwing out a coagulating lymph into the cells of the cellular membrane vessels which are inflammed carry a coagulating lymph, which adheres to their internal coat ℞ becomes vascular. — —

Lecture 3.d Paronychia.—

Paronchya is a violent Inflammation occuring at the ends of the fingers, which frequently ends in suppuration. According to the seat of the disease, it is attending with a trifling or excruciating pain. Paronychia may be divided into four kinds, 1.st when seated

and extends all up the arm —

and extends all up

in the surface of the cutis vera 2d. In the adipose membrane under the skin here the pain is much greater, and matter is frequently effused under the nail the whole finger becomes swelled & painful, 3d. In the tendons 4th. In the periosteum. In this last case the pain is very great, though without swelling at first. When it takes in the adipose membrane, there is then more danger of mortification taking place. The matter formed in these two last species of paronychia, has sometimes passed along the course of the tendons, under the ligament of the wrist & formed a tumor at the lower part of the fore arm, The bone often becomes carious & sometimes the tendons slough away. I have seen mortification from this cause It is a difficult matter to point out its causes, I have seen it in one case induced by the bite of a squirrel, CURE of Whitlow. In the cure little attention is necessary to be paid to the first kind. It may be opened and dressed with Ung Citrina or simple cerate containing Sacch Lat. when it is situated deeper than the skin make an incision down to it & if any part of the bone shou'd be decayed, it ought to be immediately if possible removed. The dressings may be either dry lint or a poultice. Boiling water has also been recommended, I believe when it has been of any use it acts merely as a rubefacient, Nothing else however than opening the part is necessary. If matter has travelled up the wrist, it shou'd be let out at the most protruding part Sometimes the orifice if small grows up with fungus flesh & prevents its healing. For destroying this excrescence, escharotics will be found tedious & often ineffectual, it shou'd be remedied by enlarg-

ing

the incision, I shall now proceed to speak of. ——

PSOAS ABSCESS. This disease is seated in the cellular membrane under the psoas muscle, where the matter is deposited in a cyst of the cellular membrane. Any of the usual remote causes of Inflammation may produce this disease. It is frequently caused by contusions in the loins & overstretching the muscles. Carious vertebra are also a frequent cause of this disease, It generally follows the course of the cellular membrane down along the bones in its progress to the surface of the body. In general it causes pain at first in the Lumbar region; but sometimes goes for the space of three months without pain. A dull pain is also felt in the upper part of the groin, & the muscles loose their power of acting, the patient cannot well stand or rotate the thigh. He generally bends the body to relax the muscles on the side affected, The patient is frequently affected with rigors. It frequently happens that months elapse before any one mark of it can be seen, Its situation is anteriorly. It is however not the same always; It sometimes forms in the bones & I have seen it in the buttocks. Sometimes the tumor is situated at the upper part of the thigh or groin & sometimes at the lower; At its first appearance it is sometimes taken for hernia. The integuments of the never change their colour, till it is either lanced or breaks spontaneously, afterwards some degree of redness is observable about the part affected. The tumour is tense when the patient erect, but when lying down it is soft & flaccid, Pressure on the abdomen increases the tumor, Coughing renders it more tense, The fluctuation may be readily felt. ——

Purging with Cream Tart & Jalap for 3 or 4 months has often cured it in the forming state, tho the patient at first is often very weak, they fatten upon this treatment

These abscesses never open forward into the cavity of the peritoneum, but have sometimes destroyed the sides of the contiguous vessels and thereby produced fatal hemorrhages. If they remain long they may produce caries of the vertebra; this disease has been found near the anus & confounded with Fistula in Ano. It has also been taken for bubo.

Treatment, If we are called to see the patient soon we must endeavour to keep him at rest, and avoid all animal food, Scarifications on the back, leeches, cupping &c. are serviceable, Purging must be not neglected and the patient must lie on his back; a Blister should likewise be applied to the upper part of it, and Issues in the loins. When there are tumors formed externally, it has been disputed whether the abscess should be opened or not & some authors are afraid to make an opening into the cavity, but where it is long in opening, it puts the patients Life in danger if it be left to open of itself. Some authors suppose that opening them produces irritation & fever & therefore do more harm than good. Among these is Jno. Hunter, this illustrious author has observed, that all cavities inflame, if opened unless the wound unite by the first intention. he observes that the Inflammation would attack every side of the cavity, which is the cause of all the other symptoms that follow: Mr. Abernethy taking the idea no doubt from Mr. Hunter proposes to open it so that the wound may unite by the first intention, He has proposed to perform the operation with a Lancet. The puncture is to be made so as to let the matter escape but to let no air enter, viz make an incision in a longitudinal line. —

thro' the skin with the fibres, the lancet is then to be pushed obliquely thro' into the abscess, by which means a valvular opening will be made, & the wound will unite by the first intention, we shou'd use no probes nor any thing of the kind to ascertain the depth of the sinus; for they irritate the sides of the abscess and sometimes rupture small bloodvessels and the blood issing out from these vessels lodges in the abscess and becomes an acrid ichor. Thus I have seen an abscess first opened discharge a good matter wh. being irritated by a second opening discharged a putrid sanies. when the matter is discharged, bring the edges together with adhesive plaister. After the matter has been discharged a few times in this way it may be openid with a lancet freely without the least danger as the sides of the cavity will be brought together and so closed as not to be inflamed. This is the best method of treating those abscesses I have tried this method myself & have found it to answer very well altho' I have never succeeded in performing a cure, because all the that I have had, has been attended with caries of the vertebræ But very unfortunately the puncture does not unite by the first intention & where this happens the Inflammation wh. was spoken of before & which is the fatal, cause comes on, Besides the different kinds of Inflammation spoken of before there is some others & first of **Erysipelas**. This is an Inflammation of the cutis vera, it sometimes begins in the fore arm & spreads over the whole body. It is frequently preceded by shivering which is succeeded by a hot fit. the skin is of a bright yellow in some cases, and dark in others

Use Inflamed repel

When Inflam - attacks the face
& comes on suddenly, with an acute
pain, let him [illegible] to [illegible]

If you press it with your fingers the colour disappears, but in removing the pressure the colour returns; The is of a burning kind, the inflammation is often much diffused, frequently spreading in one part whilst subsiding in another, situated in the face it is attendeidy with itching. Erysipelas Inflammation differs from the adherine in which coagulating lymph is thrown out, but in the former serum frequently in the cells, wh. from Blisters on the surface. Sometimes the serum escapes into the cellular membrane forming a tumor, which like gangrene or rather a quagmire. Suppuration sometimes supervenes running from cell to cell in the adipose membrane Beauses death. When mortification takes place in the cellular membrane it is discharged in flakes like two and is very offensive. This is mostly the case when situated about the mas, Erypepelas generally terminates in about ten or 12 days

CAUSES. The remote causes are so similar to those which excite common Inflammation, that I shall not enumerate them, they sometimes commence spontaniously, without any apparent cause

CURE. It may generally be recommended by attending to the antiphlogistic plan, before suppuration takes place. But when suppuration supervenes, it must be opened early to prevent its escape into the cellular membrane. Poultices before suppuration takes place are improper. Rye flour sprinkled over the part affords ease, The application of a Blister so applied, as to be partly on the inflammed and partly on the sound side is of great service, when the parts begin to heal an excoriation of the cuticle like

I find them appear on the face.

The pain is of a burning kind

Brain is a favorable symptom. In England bark is the most usual remedy for this disease ——

Edema. exist in the skin though it may be seated deeper In this Inflammation water is extravasated; It is probably the same with adhesive Inflammation, occasionly taking place in Parts disposed to dropsy. It is attended with a burning pain. ——

Treament. The usual applications are brandy & bread & milk poultices mixed with it, or with sassafras. ——

Burns. The morbid effects produced by heat, differ according to the intensity of the applications & the time of its continuance It effects are 1st When the degree of heat is low only a redness of the part affected 2d Blisters causing a seperation of the cuticle attended with an effusion of serum 3d death of the part forming an eschar as by caustic. The heat of a burning coal or of melted metals will produce this effect. Sometimes the bones are destroyed by the application of heat and frequently terminates in death. When the life of a part only is destroyed, the patient does not feel any great pain after the first effects are over till the 3d or 4th days, when the inflammatory process of sloughing takes place for the seperation of the dead part. ——

Case. A Boy walking the edge of a chaldron of hot water his foot slipping, he fell into the midst of it, he was wet 2/3 over, and his clothes keeping the heat to the part a considerable time he was very much bowrided his pulse was scarcely

perceptible and his extremeties cold. A heavy drowsiness prevailed. he was very restless & kept constantly changing his position. He spoke none at all except when asked a question, and then he answered ratiionly. And when interogated respecting his feelings, he said he felt no pain, he died in about 6 hours, when these symptoms are produced by fire the patient seldom if ever recovers. Burns affect old people the most though they prove fatal at times to all ages. A deep burn if it be of small extend and spread but little is but a small Injury But if it be of great extent though very superficial, yet it's very dangerous, when burns happen on the head they sometimes occasion Inflammation of the dura mater, Burns occasioned by any of the melted metals appear frequently to be of no serious consequence at first But after some time the skin & muscles slough off and leave the the bones bare, hectic fever ensues & the patient dies, Burns occuring over large joints frequently produce alarming symptoms hectic fevers comes on and amputation is absolutely necessary for the recovery of the patient. I consider Inflammation resulting from burns, as different from all other Inflammation, In the first place the pain is of a different kind, from that of any other Inflammation, it being of a burning kind 2d. in not being capable of resolution and causing ulceration of the parts underneath which throw up fungus granulations which are very difficult to suppress, 3d. The cicatrix formed by ulcers resulting from Burns have a disposition to contract much more than other

cicatrix have not the result of them; causing thereby a much greater deformity of the part affected 4th they are cured by totally different remedies; as volatile alkali. Sp. terebinth and stimulants in general. —

treatment. The remedies applied in cases of burns are very numerous they are either general & local. Most authors advise depleating remedies, indiscriminately in all cases of Burns: but it should not be used unless fever or great Inflammation supervene. If the Burn be extensive & great Weakness attend, the patient may be supported by Bark & wine and even Brandy & water; he should have any nourishing aliment, he desires. The pain of the part should be relieved by Opium, If the extremeties be cold sinapisms. If from this invigorating plan of treatment, Inflammation and fever should supervene, V and a more spare diet may be necessary; The local remedies advised are, cold water, soap suet & Mr. Carl, in a small treatise recommends above all other applications. Vinegar and water this is a good application. Lime water & oil; these form a crust like a cuticle & the common people use potatoes; but of latter times very stimulating applications have been used as red pepper volatile salts Sp terebinth &c. Lately Mr. Kentish has used Sp terebinth, combined with Basilicon, & I have used it in many cases with success; The most of these remedies, as cold water &c act only as Palliatives relieving the pain and soothing the part for a time but the Terebinth & basilicon spread on rags, and applied is a permanant application, Volatile Salts and Vinegar are very good applications. —

I have used vinegar with very good effect; the Basilicon & turpentine should only be applied to the parts burned, for if it be in contact with the sound skin it will cause pain and great inflammation and swelling of the part we are frequently not called to Burns, for 3 or 4 days & after a number of applications have been tryed, even after this time I have not hesitated to apply the Basilicon & turpentine & always with advantage In one case of a Burn of a child the turpentine & Basilicon & was applied; but owing to the superstition of the Parents together with the clamors of Old Women, it was omitted three or four days without my knowledge. the child became worse, and a fungus arose over the surface of the Burn, I was sent for again, I ordered the part to be sprinkled with burnt allum, and the turpentine & Basilicon were applied, which soon cured the patient, In a Patient who was burned with Gun powder, this medecine was used. the pain entirely left him in about 4 hours, after the application of the ointment; However he presently complained of a pain in his little finger, which upon examination appeared to have not any of the ointment on it and upon its application the pain quickly ceased, the Inflammation subsided and he was cured very soon. Spt teretinth is one of the best applications in those cases. Inflammed parts when in contact with each other, are very apt to grow together. So that we should be very careful to keep the dressings between inflammed surfaces wh. are in contact with each other, whilst they are suppurating and granulating, otherwise the granulations will unite & adhere together. ——

the system has a great deal to do in
the equipoise caused by Drooping Plan age—

I knew a case where the fingers of one hand, in consequence of a burn all adhered together, or to each other. Which evinces the necessity of keeping dressings between them: I once knew a case of a scald upon the parts of generation of a person which for want of proper care, to keep the parts seperate whilst healing, all united together; the penis adhering to the scrotum & the scrotum to the thigh. About the age of puberty, the young man becoming dissatisfied with this confused mass, applied to Mr. Hunter for relief, who undertook his case, and was fortunate enough to liberate about two inches to the no small satisfaction of the youngman. Burned parts some times form a ligature round the limb, stopping the circulation of the limb and producing mortification. When this takes place the band should be cut open. ——

Lecture 4th

Of Mortification. It may be termed the entire death of a part or destruction of any part. There are two kinds or Mortification. I shall begin by observing that the previous state of the system renders it more liable to mortification at some times than at others, as in old people, habits affected with dropsy &c. Mortification is of two kinds. 1st Inflammative or that preceded by Inflammation 2d Debilitative or that preceeding from langour. 1st of Inflammative; the causes are violent contusions and the applications of intense heat or cold 2d Debilitative, from obstructions of the circula-

-tion

of the Blood, either by pressure or tying up the principal artery: They both operate in the same way by cutting of the supply of Blood. When a part looses its life it first becomes purple (livid) then livid & (purple) lastly Black. The cuticle soon seperates from the other parts. — In cases of violent Inflammation the evacuations should be promoted & opium given at night or in day to relieve the pain; Bread & milk poultices should be applied to the part & continued there till the dead part slough off. Intense coldness if not severe enough to kill; produces first a paleness of the exposed part which is succeeded by a redness and is attended with a burning sensation and soreness of the part affected. Snow & fresh spring water should be applied to the affected part, after which the warmth of the body should be gradually increased to a comfortable state. Mortification often comes on without any apparent cause. Of Mortification preceeded by Inflammation there are two kinds 1st. Where the Inflammatory action is to great for the powers of the part to sustain support. In the 2d. there is something peculiar in the nature of Inflammation, other than the inflammatory action producing death not from the degree of fever. Wine injected by an clumbsy Operator for hydrocele, into the cellular membrane of the scrotum, has produced Inflammation and mortification of the whole cellular substance & bottom of the scrotum, which being destroyed sloughed away and the whole cellular substance

but it is not exclusively
Coupua
Mortifera sometimes
scarification are never to be
made with the mortifera Plate

came away with an intolerable factor. The escape of urine into the cellular membrane has caused the same effect. Mortification often takes place in the toes of old people especially. It commences with pain & slight Inflammation of a purple colour: vesications sometimes take place around its edges, but not always. Its progress is for the most part slow the upper part of the foot swells, and the cuticle becomes distended detached I mean. I have known it to arise from the pricking of a pin in cutting corns. CURE. Opium is the best remedy. all stimulating medecines as the essential oils are to be avoided. Never make scarrifications; or apply stimulating substances to assist in throwing of the sloughs, for when the mortification ceases, the parts will slough off without any assistance. Blisters should not be applied in this kind of mortification, for whatever incites or stimulates the part increases the disease. It has been advised to amputate in this disease, but this should never be done while the mortification is progressing, lest it attack the stump & the patient undergo so much unnecessary pain. In a case of a mortification of the foot which came on with an very offensive smell. I was induced to amputate it, a little above the ankle at the particular request of the patient. the arteries were completely ossified, so much so, that I was obliged upon tying them up to squeeze the surfaces together with my thumb & finger to prevent hemorrhage, a circumstance which often occurs in such cases. Pressure often occasions mortification in the.

parts contiguous to the sacrum, in people who are confined upon their backs from broken bones and other causes; and is most commonly attended with Inflammation. I have seen mortification produced in the arm from the pressure of the Bed clothes. The Symptoms are a burning sensation, a dark red colour, disappearing when pressed and returning slowly; a tumefaction takes place wh. readily receives the impression of the fingers, small blister containing serum rising around its edges as the disease advances the red globules are thrown out & the part looses its sensibility. The circulation becomes languid, the part looses its natural warmth, and gradually becomes black.

CURE In the first place the exciting causes should be removed. If the theory which I have advanced be just: that the disease depends upon too much action, then all stimulating Pills, Balsams, cordials, scarifications &c. should be carefully avoided & all hot fermenting poultices should likewise be avoided. The remedies for mortification are first general & secondly local. first the general remedies are 1st. Bl. if Inflammation be present, but if it proceeds from langour of the part Opium, should be given with nourishing diet Bark &c. If the patient be accustomed to the use of wine it may be continued in every instance 2d. The local remedies are blisters to the part affected; Charcoal Poultices are of use to prevent the smell of the dead part

℞ Acid Nitri ℥ii
Aqua ℥iiii
nitric acid
24 - aqua

small pot, having a dimple

the sensation has been compared
to that of hot coals

" the sensation has been compared to that
of a pan of coals applied to the skin

When Mortification proceeds from Erysepelas in the Cutis Vera, and pus has made its way into the cellular membrane, it should be laid open freely and treated with bread & milk poultices. I have long been in the habit of using Nitric acid and water equal parts. It stops the fetor, by stopping the putrefactive process. It may also stimulate the absorbents into a gacker action, and cause the dead parts to seperate more quickly. It should not be applied to near the living parts, or it will cauterize them. If the weather be very warm, maggots are apt to form in the dead parts, washing it with diluted acid will remove them. — The 2d species of Inflammation is that peculiar kind wh. produces carbuncles. They are circumscribed hard tumors they begin on the skin like pimples, are of a dusky red colour, with pale edges, attended with a burning pain. A kind of suppuration takes place in the cellular membrane but good healthy pus is never formed. They are mostly situated on the back & sides, and occur most frequently in persons that have lived well. They if large and numerous. They sometimes occur on the head but very seldom. They are most dangerous if situated on the head, if large & numerous, much however depends upon the constitution, A Case of Dr. Wister will serve to shew the peculiarity of the Inflammation. "he was called to a man between 50 & 60 years of age, in consequence of one of these carbuncles on his leg. A circle

It was attended with a burning —
a loud noise of boilers in the middle

of Inflammation surrounded the tumor. the Dr. was called about three days after the commencement of the disease, after trying a number of remedies without any effect Dr. Munges was consult-ed, who said he was well acquainted with them in France, and has cured several of them by scarifications, accordingly it was scarified transversly, about 1/4 of an Inch a part, all over the surface and then a circular incision made all around it, this effectual-ly cured it, It cured it by changing the mode of action to the adhe-sive Inflammation. Some years ago, I was led by the uncertainty of the remedies employed in gangrene to seek, for some remedy more certain and effectual remedy. From the good effects of Blisters in many cases, I was led to try them in mortification, and they succeeded beyond my most sanguine expectations. The good effects of Blisters may be seen in the case of Capt. R. C related in the, 3d Vol of Coxes, museum, who under a mistake had used, Persicaria, for a common purpose after going to stool, in consequence of which a violent, Inflammation ensued in the region of the anus & scrotum. the antiphogistic remedy was tried, without effect, And after resisting Bark, in the most dangerous state and many other remedies, it was cur-ed by the application of a Blister to the part affected. The pain in Inflammation is caused by the distention and spasms of the vessels. A patient of mine was affected with a violent pain in the foot, A small reddish spot was seen on the top of it, appearing like eskymoses. at first

+ a poultice of carrots —

Oil will not prevent the parts from
sloughing away after they have mortified

which afterwards disappeared, and came a little above the ankle. The patient now complained of great pain when the foot was raised up, but which was somewhat abated upon lifting it down owing to the diseased action of the vessels, because the blood filling the spasms overcame the spasms, which were the cause of the pain, for when the foot was raised the vessels were emptied of the distending blood, and the convulsive action took place. A charcoal poultice was applied over the foot. His Bowels were disordered owing to his having taken too much laudanum, which was relieved by a purgative. the Bark was given largely to the extent of 16 oz. a day but without any good effect. applications of Bark & Brandy were applied on the stomach and 3gr Vol. Alkali given every two hours. The Bark was found to be of no service & therefore was omitted. Senna & Manna were given to obviate costiveness. A Blister was now applied, which stopped the mortification, and changed the lived colour, which passed to a red below the Blister. The fermenting charcoal poultice was omitted and another Blister applied just below the other on the limb which was of a dark colour and cold. The dead part was washed with Nitric acid and water aa parts. The mortified parts now gradually sloughed off, and the the patient recovered. When Mortification is caused by Inflammation a Blister should be applied. Mr. Hunters theory of Mortification is pretty generally received.

Mechanical pressure they diffe-
by the diffe- in which they are
made. It is a solution of continuity

ing "an increased of action beyond beyond what the powers of the part are well able to bear" But I am rather inclined to think in every species of Mortification, there is something peculiar leading to the death of the part, something more than the violent inflammatory action. For if it depended on violence of action alone, then the application of the Blister, which is a highly stimulating application, ought to produce death of the part more quickly by producing a still greater action. But on the contrary they effect a cure. I believe by altering, the disposition & the change of action mode; from the diseased to the healthy kind. Blisters have lately been found as effectual in the cure of carbuncle as of any other kind of Inflammation: especially in relieving immediately that distressing sensation of burning pain. I have lately cured on the Back of a Lady as large as a plate, which she compared to a warming pan of hot coals, the sensation was so distressing, as soon as the Blister was applied the mortification stopped, the dead part sloughed away in a few days, the sore healed kindly in a short time. ——

Lecture 6th on Wounds.

A wound may be defined a seperation of the external parts by mechanical violence. They differ according to the situation injured part, and the instrument by which it is done. There are two kind of Wounds, 1st Incised & Contused

an uvula is only injured when it is divided dia no further

when a bar is made a hal-
ve, so that the extremes opening

An Incised is made by a clean cutting instrument and sharp
An Contused one is made by a blunt Instrument, by bruising
the sharp soft parts and is divided into three kinds, viz
Lacerated, Punctured & Contused or Gun shot. Wounds
are always attended with a greater or lesser effusion of
Blood. In incised, there is generally a considerable flow
of blood. But in lacerated, larger vessels are often divided
without any considerable hemorrage. Incised wounds bleed
much, more than contused ones because in the first place, there
is nothing to prevent the flow of blood; but in the latter
the dead matter at the ends of the arteries, caused by the con-
tusion, acts as a stimulus to the coagulation of the Blood
"I once saw a case where a Boy had his arm ground off
by a mill, between his elbow and shoulder, in this case no
hemorrhage scarcely ensued, owing to the contused arteries
causing the blood to coagulate in their extremities, and from
plugs, stopping the blood in the same manner, as if the ends
of the arteries were plugged up. An Incision with an knife
would have caused a much greater hemorrhage, There are
three ways in which hemorrhage may terminate in cases
of contused wounds, 1st. By a diminished circulation 2d.
By the coagulation of blood, forming plugs and stopping
up the ends of the arteries. 3d By pressure, caused by
an effusion of Blood into the cellular membrane, which
pressing on the sides of the vessels diminishes their diame

necessary to pass the tenaculum along with the finger, after previously tying a simple knot over the finger and tenaculum, till you come to the artery; as soon as you can get hold of the bleeding vessel, slip the noose over it and secure it. In cases, where the tenaculum cannot be used, where the vessels are so situated, that we cannot see their orifices, recourse must be had to the needle armed with a ligature, passing it around a portion of the flesh, and tying up all together. If the orifices of the wound be to small enlarge it with a scalpel. This does not often happen. If the injury is received on the upper part of the arm; the tourniquet cannot be applied. Here compression with the finger may be made upon the subclavian artery; just where it passes over the first rib, or if the injury be done to the artery upon the upper part of the thigh, pressure may be made in the groin, just where the artery passes out of the abdomen. Sometimes pressure may be made above the wound long enough for the formation, of a plug or coagulum in the extremity of the divided vessel and so put a stop to the bleeding. It sometimes happens that vessels are divided in such a situation, as not to admit of this kind of treatment; as in extraction of tumors from the mouth which are supplied by 3 or 4 arteries. If only one vessel be divided the hemorrhage may sometimes be stopped by holding a compress of lint; for

a few minutes on the bleeding orifice. If the takes place from a number of small vessels, it may be restrained by a compress of lint, cold, vegetable astringents &c. But if this is insufficient, we must have recourse to the ancient but cruel method, the hot Iron. After the extraction of a tooth it is sometimes necessary to use this remedy. When a large orifice is made in an artery, the hemorrage may sometimes be stopped by elevating the limb; so as to retard the motion of the blood from, and facilitate its motion toward the heart. We sometimes find were the vessels are injured if the external communication be small, that the coagulum of blood in the orifice, will stop the blood. I once saw an instance of this kind, where a boy in quarrelling with his school fellow, received a wound in the arm with his penknife, the immediate consequence of which was an effusion of blood into the cellular membrane of the muscles, causing a considerable tumor and great pain. The whole calf of the leg was very much distended. In this situation he walked home increasing both, pain & tumor. We went to bed, and next morning both pain & tumor were gone. Supposing himself well he got up & dressed himself and went down stairs when the tumor and pain immediately returned, he went to bed, and then they subsided. This alteration, was experienced two or three times, I was now called. I immediately pronounced it a wound of the popliteal artery. I put the boy to bed and raised the limb, to take off the force of the blood by its gravity. The volume of blood was considerably lessened

by two or three lbs. and in a fortnight he was quite well. In such cases no probe should be used to ascertain the depth or situation of a wound lest you destroy the pulp formed in the artery, and bring on hemorrhage. In cases therefore were a large artery is wounded, and the hemorrage has ceased by the clotting of the blood, I think it extreemly wrong to remove the clot by probing, or endeavouring to take up the artery. The practice of some Surgeons stuffing the part full of lint, is a very injurious one, and ought always to be avoided, lest you tore open the coagulum, which nature has kindly formed, after the stoppage of the hemorrhagy, bandages, adhesive plaster, or suture must be had recourse to, for approximating the edges of the wound, and if the injury be done to the extensors of a limb it may be necessary to apply a long splint to secure the limb in an extended position, In most cases the adhesive plaster will be found necessary or sufficient, But in wounds of the abdomen sutures must be used, the coagula should first be wiped away, and then the adhesive plaister spread either on leather, or new leather, and cut into strips they should then be applied transversly over the incision drawing the edges together, The should be applied about 1/2 an Inch from each other, in order that the bloody matter and pus may escape, for if it be confined it may collect in the cellular membrane and occasion an abscess: This seperation of the strips is more especially

necessary when an artery or a vein has been taken up, so that the the ligature and pus necessarially formed may have passage to escape; after the sides of the wound are drawn together by adhesive plaster, and secured, a portion of lint cutted to the size of the wound, and spread with any kind of cerate may be applied, on the top of which, a thick layer of linen is to be placed, and the whole secured in order by a bandge, this dressing should not be removed for 48 or 72 hours, in which time I have seen the incisions compleatly united. Inflammation is now only to be feared, If upon removing the dressings, much, Inflammation, has taken place B/ is to be used according to the symptoms low diet & rest Purges, should be given occasionly, given to prevent, costiveness, If no Inflammation ensue, and the patient be weakened he may take some animal food, as some Inflammation is necessary to cause union. This practice is recommendable, except in wounds made with glass, wh. should be left to suppurate, as part of the glass may remain in the wound. Even transverse incision may be re ~~membered~~ mediated, by adhesive plaster, which will be generally be found sufficient, and the limb placed so as to cause no restraint in bringing the edges together This should always be preferred, to stitching it up with an needle, and for three reasons 1st avoiding pain 2d every stitch of the needle adds a new punctured wound

to the injury and 3d the thread mostly occasions suppuration by the irritation it produces. But there are some parts where sutures must be used, as in the eye lids, nose ears scrotum and particular affections of the scalp &c. where the parts are so flexible as not to admit of other treatment. We should be careful however in wounds of the scalp, not to draw, the divided edges too hard for the purpose, of bringing them into contact lest by overstretching the scalp, we stop the circulation and so produce mortification of the bruised parts.

Punctured wounds. A punctured wound is a seperation of the soft ~~parts~~ solids, communicating by a small opening. The irritation is greater here than in incised wounds In cases of punctured wounds we should be very careful in using the probe for the purpose of investigating the dept of the wound, since by that means we irritate the part and cause any adhesion that might have taken place to be destroyed and thereby prevent or retard the cure. It is best to make an incision to examine for any extraneous substances near the surface, than to use probes or forceps for this purpose. This should be done soon after the accident has happened, or else defered until suppuration has taken place. When any extraneous substance is in the wound body of the wound, if it cannot be extracted without a good deal of probing, it may be left till the wound suppurates, when it may be seperated with care.—

After suppuration has taken place and the extranious body still remains, it then becomes necessary to dilate the wound or when large vessels are wounded, and cannot be taken up without, again it becomes necessary to dilate them. when the constitution suffers from them "a lad in getting over a fence, fell upon a nail, which ran into the flesh, below the knee, about an inch upward toward the knee joint. Febrile symptoms came on he complained of sickness, in the epigastric region, pain in the neck and head, his pulse, quick and frequent. The wound was opened and the pain was translated to the wounded part immediately, and excepting here he felt no pain at all in any part of his body. the wound was dressed with common poultices and healed kindly. I knew a lady that was thrown into convulsions by puncturing her finger with an needle the convulsions continued for the space of 1/2 an hour, the puncture was then dilated, and the spasms went off without returning. When punctures or contusions happen during warm weather, they should not be healed up too soon, but suppuration of the part should be promoted and cordial diet and wine should be given by which means we frequently prevent tetanus. If inflammation runs high, a blister over the part is a very proper application, In some wounds of the scalp, and also of the extremities, it is proper, to dilate them to keep them from healing to soon. Lacerated wounds. we will speak next of.

Lacerated wounds are made with blunt instruments which kill the flesh where it is seperated. Anodynes combined with small doses of emetics are useful, when they act as sudorifics for the purpose of composing the patient they should be given till the dead parts come away. If Inflammation accompanied with fever supervene, it must be remedied by the antiphlogistic regimen. If symptoms of mortification come on, ease the pain with opiates, and prescribe porter wine bark & a generous diet. When by these means a contused wound is changed into a granulating sore, it may be dressed as a common incised wound. Penetrating wounds are such as extend into the abdomen thorax &c. When wounds happen in the thorax they are attended with great danger by causing Inflammation of the cavity. If the lungs be wounded or the puncture be made thro' the pleura, the air gets into the cavity, the lungs contracts and the patient performs respiration with great difficulty. If the lungs be wounded the patient coughs up blood. Sometimes the vessels are injured so that we must take them up. If one of the intercostals artery be wounded so that we cannot get at it with the tenaculum, pass a ligature round the rib and secure it in that manner It is to be done with an needle, I have never performed it in this manner. Gun Shot wounds. Shot causes the worst wounds because they always take the soft parts and occasion a loss of substance and soft parts. Wounds in the thorax

occasioned by balls are very distressing. They generally kill the part where they enter, making it necessary that the part should suppurate, and slough off before the orifice can heal. The patient with anxiety and difficulty of breathing. By rest low diet &c are necessary. The dressings are apt to be drawn into the cavity of the thorax in breathing. This had very nearly happened once under my care. Care should therefore be taken to dress such wounds with adhesive plaster, or bread & milk poultice confined in a gauze bag for that purpose. The edges of the wound when not killed, should brought together, to unite if possible by the first intention. When the sides of these wounds are approximated, the cavity is rendered compleate, and a cure is effected with Inflammation. No bad effects are to be dreaded from the air that may remain in the cavity, this never produces Inflammation, as proved by cases of emphysema. The Inflammation when it supervenes arises. Mr. Hunter says from the stimulus of imperfection. A dispute arose between two officers, whereupon one stabbed the other with a dirk just above the right pap. the air had admittance into the cavity of the chest. When I saw him his pulse was small and irregular. his extremities cold his countenance ~~cold~~ livid: No symptoms of Inflammation of the pleura appeared. I applied adhesive plaster over the wound and the third day it had united and by the 11th he was able to walk &c.

pop the medallion

Having spoken of wounds in general I shall now speak of particular ones and 1st of Wounds of the face, as they are many cases in the treatment of which, sutures are likewise necessary, so they are cases in which they never should be used the ancient surgeons used sutures in almost all cases of wounds but in wounds of the face sutures should not be used, as it always, causes deformity, by the marks of the stitches remaining after the wound has healed. I have seen a Lady one side of her face very pretty and the other deformed in consequence of this mode of treatment. In incised wounds of the Eye lids unless the tarsus be divided adhesive plaster will generally be found sufficient, but it is sometimes necessary to make use of stitches. When this is done we should be very careful not to puncture the adnata the stich should only go thro' the skin of the eyelid, because if the thread was to come in contact with the globe of the eye, it would continually irritate it and bring on inflammation of the whole of the eye. I have seen a case where a shot had entered just at the edge of the Sclerotica and penetrated to the chrystaline lens I had another case where the eye of a young lady was punctured by a piece of glass. — From whatever cause they eye may be injured, we should endeavour to remove all irritating substances and well timed bl and purging, low diet, blisters

Cauterisations &c. with the use of collyria we may prevent suppuration the best collyrium is an Infusion of ~~tobacco~~ the pith of sassafras in water, or milk and water and the patient should be kept in a dark room. If blindness occur it is sometimes in the power of the surgeon to remedy it by an operation. Of this I shall more of hereafter. Ill a case from Coxes museum. Generally in wounds of the lip attended with no loss of substance, it is only sufficient to bring the divided edges into contact with adhesive plaster. But if a portion of it be lost, it will be necessary to use sutures In wounds of the tounge which we sometimes find to occur from people biting, or receiving a blow on the chin when the tongue was protruded, it is necessary to use the interrupted suture as it is difficult to get at a wound of the tongue, the patient shutting his mouth from pain, it is requisite to place a soft stick between the teeth to prevent his being bitten. the tongue if necessary may be drawn out with a hook. Wounds of the tongue usually heal in about six days. the patient should be spread with spoon victuals. In treating wounds of the eye in children it is best to have the eye secured by a speculum when the chrystaline lens or its capsule are punctured, blindness is frequently the consequence: "I have used necessary in the care of a Lady, who had a darning needle run into her eye, producing an opacity of the lens it was attended with very good success. But in general I would recommend the application of a blister over the eye, before resource be had

to the mercury. But when a blister is to be applied, it is necessary to be very careful in preparing it. the ointment should be of the mildest kind, lest some of it getting into the eye may irritate it. the cantharides should be well mixed with the ointment, and a piece of white gauze should be laid over it. &c.

In wounds of the ears a simple suture is sufficient.

Wounds of the throat when the skin is only divided, there is no difficulty in curing it; but sometimes the trachea is divided and the large vessels exposed. the first that is to be done is to attend to the hemorrhage, and secure all the bleeding vessels, either arteries or veins even if the carotids be divided they may be secured by ligature; as the circulation to the head may be carried on by the vertebral arteries. when the hemorrhage is secured, the sides of the wound may be approximated; This can mostly be done; if small by adhesive plaster alone, but if this is not sufficient, we may use suture, having caution to include the skin and cellular membrane only; for if a stitch was taken was taken into the throat, it would create vomiting coughing &c. by irritating the pharynx, and if a stitch were taken in the side of the trachea, it would occasion a continual coughing when this is done the head should be inclined forward to favor the union of the divided edges, and be secured in that position by a bandage. I believe in most cases it would be most proper, not to draw the divided edges

to close, so that the blood and matter collected may be discharged. all the arteries and veins should be secured though apparently done bleeding. for if an be left oozing from their orifices, it may escape into the wind pipe, and cause suffocation. In wounds of the throat a great deal of inconvenience results from swallowing as every attempt to swallow must seperate the sides of the wound. to remedy this, it has be advised to introduce thrut the nostril into the throat, for the purpose of introducing food into the stomach; but it causes to much irritation, to be practicable, keeping the patient continually coughing or sneezing. he should be supported by a nourishing diet given by the way of injection and repeated frequently. If cough occur it should be relieved by demulcent. Wounds of the Abdomen where these are superficial only, nothing more is necessary for the cure, than in wounds of any other part of the body but if the wound be thro' the parietes of the abdomen, there will be danger of peritenal inflammation. To prevent this, it well be best to unite by the first intention. If the intestines protrude after cleansing them they should be returned, and the wound closed by the interupted suture. In the suture of the abdomen two needles should be used with each ligature; and the stitches commenced internally at the distance of 3/4 of an Inch from the divided Edges, and the stitches 1/2 an Inch a part, so as to leave room for the escape of matter. they should all be taken before any of

them are tyed. the patient is to be kept to a regorous diet, and the bowels freely opened. When union takes place between the divided edges, the stitches may be removed, and the wound covered with adherine plaster. When wounds penetrating into the cavity of the abdomen occur, the surgeon should first search for the injured viscera; for if any of these be injured, they should first be secured, before we attate up the wound of the parietes. The chief danger arising from wounds of any of the hollow viscera is from the escape of their contents into the cavity of the peritoneum; for if this takes place the life of the patient is in danger, generally in wounds of the abdomen; a piece of the omentum protrudes at the orifice; and if the intestines be wounded fæces frequently pass out, and the patient will have bloody stools. Nausea vomiting, a sense of tightness, and fainting are the attending symptoms. If the stomach be wounded, food will be discharged; a vomiting of blood causes cold sweats, a tendency to faint, and when fatal the patient generally dies the third day, after running in a state of coma till death. When the intestines are wounded they may be stitched; four stitches will be found sufficient the knot may be tyed so as to be on the inside of the intestine. When this is done cut of the ends of the thread and return the intestines. the thread will get into the cavity of the intestine and pass of by stool. Transverse incisions of the intestines are easier healed (according to authors) than longitudinal

ones, and it causes much more pain to close a longitudinal one than a transverse one; It lessens the diameter of the intestine causing a lodgment of faces at that place. If the longitudinal wound be not so extensive, that portion of the intestine may be removed, and the transverse ends closed together. This practice has been tryed and succeeded where three inches were cut out. The patient should be fed sparingly, so, as not to distend the intestine, his food, should be mostly spoonful nutrials. Laudanum should be given to ally the pain and keep the intestines still; so that their peristaltic motion, may not prevent the union of the wound. Glysters should be administered, else probably a part may escape by the wound. Gun wounds of the stomach may be stitched. I have seen a case where it was done and the patient recovered. When the omentum or Mesentery are wounded, generally some hemorrhage ensues, the bleeding vessel should be sought for, taken up, and secured by a ligature, but the ends of the thread must be left to hang out at the external wound. Sometimes the bowels are injured and do not protrude. In this case it has been a question in dispute, whether the wound in the parieties should be dilated, to search for the injured intestine or not. I believe it is right to enlarge in a degree, when the wound is not large enough already; but the wound should not be enlarged freely otherwise we should induce great inflammation. There are cases

where the intestines have been wounded, and recovered, where nothing had been done. In such cases where the intestines are wounded it commonly unites to the peritoneum round the wound of the parietes by the adhesive inflammation. It would seem that when the intestines are wounded they stop their peristaltic motion, so as not to prevent their union. When the bowels are injured and cannot be found, if the orifice be large enough for the intestines to protrude, it should be stitched up. If much pain attend Laudanum may be given, if fever and inflammation ensue, copious bleeding and low diet &c are necessary, and sometimes tho' the circulation seems weak the inflammation is great. Wounds of the Liver. when the right hypochondriac region is wounded, the liver is most likely injured; If the right lobe be wounded pain is felt in the right shoulder, if the left pain is felt in the left shoulder. the pain is of a heavy dull kind. Generally there is a profuse hemorrage, owing to the large quantity of blood vessels this organ is supplied with. If the wound be small it will generally heal soon, but if large there is generally a fatal hemorrhagy. Often inflammation of the peritoneum is occasioned by the detention of blood in the abdomen. In these cases little can be done by the surgeon. the patient should lie low on barley water, and if the pulse be hard or full bleeding must be used freely. If the Gall Bladder be wounded, its contents

will escape into the cavity of the belly, causing by its stimulous violent inflammation, and always proves fatal. The same thing happens from wounds of the pancreatic duct. When the Kidneys are wounded the patient will pass bloody urine, and if it escapes into the cavity of the abdomen produce death. Tho' the back part of the kidney may be wounded and the wound heal without any great inconvenience: for in such cases what urine escapes passes though the integuments of the back. Wounds of the Bladder mostly produce fatal wounds, when they communicate with the cavity of the peritoneum: but wounded, before that cavity are attended with no bad consequences. In wounds of the joints we should always endeavour to effect an union by the first intention, for if this is not done, Inflamation and suppuration occur, and the limb is in great danger. The limb should be placed in such a situation that the lips of the wound may unite by the first intention and adhesive plaster is to be laid over it, Mr. Wey says stitches are not necessary if they are used great care is necessary to gaurd against pressing the needle within the capsular ligament, for if the needle gets into the joint, the irritation produced by the thread will cause great Inflammation of the whole joint Even when the articulating surface of the bone is injured I would attempt union by the first intention. In a wound or any disease of the joint it is necessary, besides the other applications, to apply a splint, to keep the joint perfectly

x except in the arms, were they should be bent or flex'd so that if the joint anchilosis, it will be of more service than a straight one. ---

immoveable. I saw a case where a turner cut his knee with an chisel the wound was about an inch, and was oblique, penetrating thro' the capular ligament. It was closed by adhesive plaster, and a long splint was applied so as to reach from the ischium to the ankle to keep the leg extended. No unpleasant symptoms came on, and the patient in about a week was well. I have seen wounds of the joints where the bone was injured yet by this mode of treatment he got well when the capsular ligament is injured by a contusion, a favourable position of the limb, must be maintained, the antiphlogistic regimen, & by leeches, blisters &c. must be had recourse to. When the ends of the wound granulate, so that they will adhere, we should bring them together with adhesive plaster, and treat it like a recent wound. In such cases it is a question among authors, whether amputation should not be performed? If the limb is not amputated delirium and mortification frequently come on, and if neither of these two ensue, the patient is in great danger of tetanus especially in warm climate, or warm weather. At least the wound is very painful and tedious, the end of the bone becoming sometimes carious and if it heals up an anchylosis is the consequence. Authors generally recommend the ends of the bone to be sawed off. but I think scraping is preferable. The patient should be informed of the danger that awaits him, if he does not submit to amputation. Wounds of the joints should always be treated with the limb extended; the bad effects of an opposite mode of practice, where the sides are prevented from coming

together by bent, may be seen in the following case. A patient who had received a wound in the knee joint, was treated in this manner and in consequence, afflicted with delerium, twitching convulsions &c. so that he could not sleep unless two persons sat by him and held the limb, abscesses formed under the capular ligament both above and below the joint. Every time the dressings were removed, a considerable quantity of matter together with of the joint was discharged, and great Inflammation of the joint had taken place. The at first was a clean incised wound, After this an edema came on, but which was cured by marcurial cathartics. This case however got well after 4 months. A Splint applied to keep the limb extended in wounds of the joint is of great consequence. This prevent the usual symptoms, which occur without this precaution such as delerium twitching, together with Inflammation of the divided surfaces, caused by the edges rubbing against each other. It should be applied so as to prevent ace motion of the joint, as only a small degree of motion does most injury. The situation of the limb where we expect anchylotic, or where we wish it to take place, will vary according to the limb affected. If it be the elbow, the arm should be moderately flexed. for if union of the bones take place when the arm is straight, the patient will have no use of the limb, so that it will be very inconvenient, but if the elbow be somewhat bent, the patient can perform many useful motions. But if the knee joint is affected. and

the limb be flexed when union takes place, the patient will not be able to walk. So that the leg in affections of the knee joint should always be extended and kept in that situation, as we can make use of it in that position. the limb being brought to the right position, the wound is to be dressed with adhesive plaster and secured by a splint and roller The patient should be bled and kept upon the antiphlogistic regimen purged and if necessary a blister may be applied if necessary. wounds often heal under this mode of treatment easily, tho' their first appearance is very unfavourable. The Cartalages covering the ends of bones forming joints are sometimes cut thro' and yet unite by the first intention. From observation, I have been led to conclude that Inflammation of joints does not as soon take place as Inflammation from the same cause would in other parts of the body. The irritation causing only an increase of the former action and a much greater secretion of synovia. In large lacerated wounds of the joints, such as surgeons call compound luxations, where they must suppurate, it has been disputed wether they should be amputated or not. When the ends of the bones are injured, it has been found that mortification frequently takes place from the violence of the inflammation and if the patient escape this, by being much reduced he is in danger of tetanus If he escapes tetanus, suppuration and hectic fever and consequent Amputation at best the limb must anchylose, and be rendered stiff always afterwards If anchylosis be prevented the cartalages will be removed

and nothing but a ligament will connect the bones together, rendering it perfectly useless. If attempts be made to save it, the best application are bread and milk poultices. There is much danger of the symptoms, I have just spoken of occuring in warm weather, and in persons unaccustomed to drink spiritous liquors. Partial stiffness is owing to adhenous forming between the capsular ligaments of and end of the bone. Before a joint can come to anchylose the cartalage must be removed, as they never unite together. I shall shew you by what means this is effected. It never inflames suppurates granulates, becomes carious nor slough off, but is removed by the absorbents. granulations are then thrown out by each end of the bone, and uniting under the ~~bone~~ joint together, anchylosed, forming but one ~~joint~~ bone. To favor this process we should keep the joint still, for if the uniting part be torn asunder, they do not readily unite together again, Authors though without being able to assign a reason for it, have advised to saw off the ends of the bones. this removes the cartalages out of the way, without loosing time for them to be removed by absorption. But this is a bad practise, because it occasions, great pain, and is performed with difficulty, & great danger of removing or wounding the soft parts. I believe scraping of the cartalages from the ends of the bones, with a knife, when the constitution cannot bear the irritation, long enough for absorption to remove it. it will answer very well and often better

A splint should always be used to keep the limb perfectly at rest.

Wounds of the nerves & tendons. When a nerve is partial divided it is said to produce great pain, convulsions twitchings &c and this was said to be the case when these symptoms followed Phlebotomy. But it cannot be dependent on this, for no surgical operation can be performed in any part of the body, without wounding a number of small branches, and yet these symptoms very seldom happen. The inflammation and swelling of the arm sometimes occurring after phlebotomy, I shall account for in a different manner. I mention this to guard you against a very terrible operation proposed by Mr. Bell, which is to make a complete division of the soft parts down to that place to the Bone. When a weakness is felt in the arm immediately after by if the operation be attended with pain, and if it increase and become worse for two or three days instead of better, then we may suppose a nerve or tendon is injured, and an incision may be carried a little deeper and divide the nerve completely. But I am happy to say that such cases do not often happen. Perhaps the best symptom of a wounded nerve, is a numbness and partial paralysis of the arm below, to which the nerve goes.

Wounds of the tendons, are no worse than wounds of other parts, unless it be punctures of the facia. These are sometimes attended, with inflammation of the parts underneath them, which are bound down and compressed, fever and suppuration ensue. When Inflammation is an at-

Dr. Physick, recommends, for the wounded tendon Achi:- to apply a piece of wood. carved to fit the Leg and foot.-

tendant upon wounds of the fascia of the thigh, scalp &c. a blister should be applied over the affected part, and if this be not sufficient to relieve the pain, and inflammation and matter be collected underneath, a free incision should be made to give a free discharge of the matter. Sometimes the tendons are cut quite thro', they require no different treatment from other wounds In such cases the limb should be placed in such a situation as to allow of an union of the divided extremities, and secured by adhesive plaster, when the tendon Achilles is wounded which often happens the toes should be extended, this may be done in two ways 1st By fastening a roller to the foot, carrying it over the heal, up the back part of the leg and securing it to the thigh or 2d by a piece of pasteboard, placed on the anterior part of the leg and secured by a roller, care should be taken however in all cases of wounds occuring just above the heal, not to make to much extension, but just sufficient for the divided edges to come in contact, for by extending the toes to much we throw the skin into wrinkles and bring them into contact with the divided surfaces, and prevent their union, this sometimes will happen from the contraction of the part even with a moderate extension of the foot, turning the edges of the wound in so, that it cannot heal, this we sometimes find after dressing it for one or two weeks, without any symptom of its healing, the skin should be turned out and kept so by the interrupted suture.

when the tendon Achillis is divided, the foot should not be used for six weeks. Of wounds of the veins the Inflammation and swelling consequent upon Phlebotomy is treated of by Mr. Hunter, in a paper upon Inflammation of the veins published in the 1st volume of the medical and phylosophical transactions which I shall read to you, when the symptoms before mentioned occurred, it was supposed that a nerve or a tendon was wounded, and the person was a bad operator, or that the constitution was bad But the Inflammation is owing to something very different viz by the orifice in the vein not untingly the first intention. It has been proposed by Mr. Bell, under these circumstances, to divide the soft parts above the wound, by a transverse incision, to a considerable depth, so that the nerves may be divided, but this should never be done, tho' it alleviates the pain, and patients have got well under such treatment. It should not be done, because it subjects, the patient to much danger, and alleviation of pain is owing only to the taking off of the Inflammatory tension of the part by dividing. When Inflammation follows bloodletting, it is generally seated in the internal coat of the vein This inflammation sometimes causes adhesions to take place between the sides of the vein and Abscesses are formed. Sometimes the pus formed in these abscesses, passes with the circulation to the heart and destroys the patient "I have heard of a man having an abscess formed just spoken of

Treatment. When Inflammation has already begun the Antiphlogistic regimen, and the sides drawn together, when the arm is much Inflammed above & below the Orifice, a Blister has been of the greatest service, first applying a piece of sticking plaister or Lint over the Orifice, the cavities of veins sometimes become entirely obliterated.

and whom pow raising his hand to his head, very soon after di-
-ed, In this case, it may be a question whether the pus from
the abscess passed to the heart and produced death in that
way, or whether the inflammation travelled along the vein
and reached the heart and that very instant, the latter I
think most probable. + Of Sutures. The kinds of sutures
which I prefer, are the interrupted and twisted, and first
of the interrupted. They are nothing more than a simple
stitch made by the needle, passed from one side of the in-
cision to the other, thro the edges of the wound, this done
draw the edges of the wound into contact and tie a knot
This however should not be directly over the wound but
a little on one side, and then the suture is completed.
twisted sutures are effected by means of a silver wire
inserted in a steel point, which can be taken off and put
on at pleasure this is to be passed, thro' the edges of the
wound from one side to the other, draw off the steel part
so that it may not hurt the patient, with its sharp point
and the wire remains behind thro' the edges of the wound
then take a ligature and wind it round in the shape of
figure the 8th always decussating in the centre, and draw
-ing the edges of the wound into close contact, when the
wound has united sufficiently to take of the thread
draw the wire out gently and the thread will come
away of itself. — — —

or lacerated they are not burnt
Some gun shot wounds unite sometimes
by the first intention, the side heals
first - then the part first

Of gun Shot wounds. These were considered in early times, as being a distinct species of wounds, the livid colour which ensued, accompanied with a black slough, with vesication and gangrene, caused them to suppose the effect must have resulted from poison or the part being burned, and because fire and poison were but little known in their nature But these wounds are now considered as so many varieties of Contused wounds. If the body occasioning the wound be of a roundish form or figure, the wound is undoubtly a contused one, when the ball goes with great velocity, it occasions the death of the denuded parts, the greater the velocity of the projectile, the greater is the injury done to the part for sometimes a ball passes thro' a part, and that surface thro which it passes out always heals first, and with less slough, sometimes uniting by the first intention without the formation of any slough, the dead parts formed into a crust or slough should be extracted with great care to prevent hemorrhage, we should therefore watch when it is about to slough off, which it generally does about the tenth day, some persons may perhaps think it necessary to extract the slough as soon as it becomes loose a little but all violence should however be avoided, if the vessels are large for fear of hemmorage, which frequently occurs when the part sloughs in cases of gun shot wounds when no hemorrhage had taken place from the same vessel

+ Ranvie recommends it in all cases —

the decided position should be never
if it is tablets are introduced —
the use of long forceps is imp—
the objection that it excites an—
a tax is sometimes formed a cord
by adhesion —

at the time of the accident, owing to the vessels being killed at that time by the contusion though not divided, which portion of them come away when the parts slough with the other dead matter, It has been advised to be freely in all recent cases of Gun shot wounds. But I would not in all cases recommend bloodletting at first. If the ball move with a small degree of velocity, it does not destroy the divided part, and therefore these cases heal sooner when the force of the ball is weak than those in which the ball partakes of a great degree of swiftness, because the parts are only torn. Gun shot wounds require the same treatment of other contused or lacerated wounds. When the ball is lodged in the trachea, the patient performs respiration with great difficulty. in such cases the Ball should immediately be extracted to preserve the life of the patient. Gun shot wounds of the scalp are generally treated in the same manner as other wounds of that part. It is necessary in some affections of the scalp to lay it open by an incision, for the purpose of examining the scalp and state of the cranium. When the cranium is laid bare by a ball, the exposed part if violently contused should be removed, as the contusion may occasion an abscess within the cranium. These occurrences do not differ from other wounds, I believe they have nothing peculiar in them "a Gun Smith who had became weary of life had determined to put an end

Erisipelas — After skin becomes of a red colour in the track of the Ball in ten or 3 days a liniment poultice —

Dan pounds Rannie's recommn of in the first in Amputation in Lectures by Arch — will not cure tetanus — As soon as Lup — Beith on Diet —

In fracture Comp — tannin — pieces of bone must not be forced back away —

to his existence, while his fellow mates were gone to dinner. In order to accomplish his design, he loaded a pistol, and applied it to the back part of his ear, supposing the contents would have gone thro his head. In this however he was deceived, the contents however did not enter the schull, but took off his ear, and all the integuments so as to expose the bone. he was however able to walk to the hospital, and to relate all the circumstances, he complained of great pain in the head, the paring was delayed too long. he was seized with delerium, Inflammation of the dura mater came on and he died" Some surgeons advise the trephine in all cases of gun shot wounds, affecting the cranium, but I would only recommend it in those instances where symptoms of the dura mater supervene. When the more fleshy parts are injured, if the Ball be deep seated, and the wound sufficiently large for the introduction of a ~~probe~~ finger it is to be preferred to a probe for discovering the situation of the ball. 1st because a probe would not convey that accurate sensation which is derived from the finger, as the situation of the ball and state of the parts 2d the probe would be much more liable to injure the part than the finger. If the wound is superficial, the ball may be easily cut out and as the patient always feels much easier after it is done, But if deep seated, we should not dilate the parts, nor use probes, and indeed the oblique course

which the ball frequently takes, renders it impossible to dilate the wound nor use probes, therefore long probes are improper. I knew a case of a wound in the ankle, where the ball had made its escape up the leg, and was found lodged above the knee. the skin preventing its escape, and a wound in the chest, and the ball found its way round the body. Linseed or bread & milk poultices should be applied to the part, and all stimulating substances carefully avoided. The treatment will vary according to circumstances. Sometimes the patient is very much distressed, and weak this should be relieved by anodynes, If the extremities are cold, Bark, wine &c. may be used. Sinapisms to them are sometimes useful We commonly bleed in cases of gun shot wounds, but not always, as to a speedy removal of the Inflammation, sometimes induces tetanus. We should not bleed indiscriminately in all cases, but wait till Inflammation & fever come on and if they are proportioned to the wound they are salutary, for both fever and Inflammation in gun wounds are necessary to health, I have seen a case, where the Inflammation, was done away allogether, by copious bleeding the consequence was that tetanus ensued, and the patient died. when suppuration has taken place, we may use the Bark with an invigorating diet, if fever nor Inflammation supervene, we may continue them but if these occur we must have recourse to the antiph-

Knee Joint with gain
hemiplegia or palsy
all parts below —
+ By respiration ceasing
+ But a Palsy takes place of all parts below
+ As the Pale wound irs funds
and wine escapes into the Bre
Pericardiac sphere — &c

Joint Division Relate a case where
a ball part thro' the joints
of heels,

lyotic regimen. In gun shot wounds, we must treat them according to the natural state of the case, or injury done, if a Bone be fractured, it must be treated like a common fracture or a fracture occurring after or from other causes, It is necessary in all wounds of the thorax to bl as they are always accompanied with more or less Inflammation and fever, I have taken 160 ℥ in 14 days, and the patient recovered. Blisters applied are sometimes of service. If the spine be injured it occasions a paralysis of the parts which receive their nerves below that part, If it be the cervical marrow, above the phrenic nerve, it occasions a paralysis of the diaphram, and the patient dies immediately, if it occurs below that nerve the patient may lifee for several days, but commonly dies in about 4 or 5 days. + Wounds of the Abdomen are more or less injurious according to the viscera injured. In wounds of the Liver I would recommend large bl. diet &c. —

If the gall Bladder be wounded the patient is afflicted with great pain, depression and bile makes it way into the cavity of the abdomen, violent Inflammation ensues, and the patient dies. Wounds of the Stomach are mostly fatal, the patient is afflicted with depression and a disagreable, sensation, nausea vomiting of Blood " Case a person who had been drinking a hearty draught of beer, received a wound in the stomach. The wound was situated equally distant from the sternum

+ Wiseman relates a case, where a Ball passed thro' the joint and it healed very well —

and ribs, part of the porter came out at the wound, and part was effused into the belly, his belly was pulled up into the hypogastric region, the patient complained of great pain and finally died. the edges in the wound of the stomach were united by the first intention, and no sign of Inflammation appeared, and I believe he would have survived the injury done the stomach and others parts, if Inflammation of the peritoneum had not taken place; in consequence of the contents of the stomach, being part effused into its cavity. Wounds of the Bladder prove frequently fatal I believe not owing to any delicacy of that viscus, but owing to the urine passing into the cavity of the peritoneum and causing Inflammation of that cavity, for we often see the neck of the Bladder divided, without any bad consequences In all cases rest is a necessary part of the cure. we should keep the patient still and mild & opening food should be given. Blisters should be applied to the abdomen, also fermenting poultices have been applied to the abdomen with success the wound should be joined together by the interrupted suture when situated in the abdomen. When a bullet passes thro' the abdomen it does not always occasion death. When a bullet passes thro a joint it is very apt to injure the ends of the bones composing the joint. + When this is the case, there is a great deal of danger. If hectic fever supervenes, amputation becomes necessary. ——

But lacerated wounds sometimes partake of the nature of the nature of incised wounds and sometimes unite by the first intention When amputation becomes necessary, I would recommend it to be done immediately by this means hectic fever may be prevented, we obviate Inflammation and delirium frequent pulse cold sweats. 2d another reason is because the patient is more willing to submit to the operation if done immediately.

Here I must make an observation which I omitted in its proper place, that if the ball be placed so as not readily to be come at, without probing, or introducing the forceps, it had better be left, for the irritation this mode of practice would produce will be worse, than the Ball loding in the Body which it does sometimes for years with impunity.

The means of stopping hemorrhagy. In applying the tourniquet upon the thigh, a compress is first to be applied but this is not necessary in applying it on the arm. After this is done, the clotted blood is to be removed, and the artery taken up and tied. Sometimes it is necessary to include a portion of the flesh with the artery. In doing this a needle armed with a ligature is to be passed, under the artery taking care, that the concave part of the needle be next to the artery for if the edge of the needle should come in contact with the artery it might divide it, Before proceeding to dress a wound it is best to wait not only till the bleeding has ceased from the large vessels, but also till the oozing from the small ones ceases too

And 3d the impediments to prevent their healing

+ By the contraction of the granulations —

Lecture 6th On Ulcers. I have said sufficient in my former lectures to give you an Idea of the deffinition of Ulcers They are a very frequent occurrence in the practice of medicine It behoves those who attend at hospitals to pay the greatest attention to the appearance and best method of the cure of ulcers, since a knowledge of their appearance and treatment constitute a principal part of our practice. There are two methods of cure viz 1st by nature and 2d by the assistance of art. As to the causes of ulcers they are of very little or no importance to the surgeon the manner of treatment being the only thing necessary to be attended. To the healing of ulcers there are three impediments 1st whatever injures the constitution, 2d Oedema and 3d improper dressings. I shall begin with an ulcer in an healthy constitution, and shall confine my observations chiefly to ulcers of the leg. In healing an ulcer, the first process is the determescence of its edges, next granulations appear raising the surface of the ulcer to a level with the contiguous parts those granulations appear first in little red ~~parts~~ points or spots and are covered with a coagulable lymph. The pus secreted is about the consistence of cream, All healthy sores are of a red colour or of a bluish white. By the subsidence of the Inflammation the sides of the sore are brought nearer into contact. + this power of contraction lessens the sore and consequently diminishes the extent of the disease this power of contraction is very fully exemplified

granulate or soften and
diminish the extent
4 – I expect in
2 nature lies not seem
to do
3 – the old bitter that the
man – in vain –
old a lies are

the Vulcan / Oil in consequence
or else every time we removed the sticking
plaister it would cause great pain by sticking
to the hair –) — —
Cold Spring – water

in a glandular part, as in the extirpation of a cancerous breast, the skin which is thrown into folds is nothing more than the consequence of contraction, I have seen it thrown into folds resembling those in the mouth of a purse by a drawing string. The next occurrence after the granulated part are brought to a level with the old skin is the production of a new one; the granulations adhere to the edges of the sore, from which is commenced the new skin, of a whitish colour, over which the cuticle is formed at the same time, and the new skin is continued over the sore. This new production in large, or an old Ulcer is not confined to one part alone, but is formed in many parts, constituting small detached places or spots, on the surface of the sore like little Islands. In the treatment we may apply dry lint, to absorb the pus, to keep it from becoming dry, and irritated, soft dressing which may be spread with a little cerate or not, should be applied over it, and confined with a roller. The roller should be slightly or loosly wrapped on, or else the lint will be too much pressed into the granulations, under this treatment they will soon heal up, forming a cicatrix. Mr. Bayntow has advised to approximate the edges with adhesive plaster which will very much ~~approximate~~ expediate the cure. If the ulcer happens upon any capillary part, it is necessary to shave off the hair, before we apply the adhesive plaster, care should be likewise taken, not to put them so, as to cover all the surface of the sore

If we apply a piece of sticking plaster over the whole sore we should cut a hole in the middle, _____

It should be applied at least once every hour

Cold water — every hour

adhesive is best applied when the parts are not much swollen

Dr Mesmond that if you can perforate in the subdural chan —

as we should by that means prevent the evacuation of pus, and cause an abscess. the parts contiguous should be pressed every day to throw off the collected matter. If the dressings stick they may be wet with a little cold water previous to the time of dressing, by that means the heat and Inflammation are lessened + the process of granulating is assisted by drawing the old skin over the sore, but likewise supercedes the necessity for the formation of much new substance, which is always more tender than that originally formed. It sometimes happens that the sides of the Ulcer ~~will not~~ when approximated will not unite, they should then we washed with spirits or touched with caustic, Powdered Rhei has been found useful, If these fail, the surface of the sore if small should be exposed to the air to dry and form a crust, under which a new skin will often form, and when the crust comes away the sore will be healed. It sometimes happens that the flow of pus is so great, as to prevent the adhesion of the sides, so that they cannot close up, an astringent wash generally abates this, For this purpose I used a wash of bitrid alls and sacch sat in a patient of mine which immediately stopped it, adhesive Inflammation came on and the patient got well, In a healthy constitution, ulceration seldom demands the assistance of a Surgeon, the blood vessels are more firm and vigorous, and capable of carrying on a healthy action

When an Ulcer is ~~[illegible]~~
on the leg the veins &
the vein found in hepels are
not strong enough to bear the
column of Blood and 2d yet
they may not burst the
Blood stagnates —
by the outline of the hepe-
the veins [illegible]
× and rest by all means —
2d when Blood stagnates
they often die

greater action must necessarially take place in the vessels of the lower part of the body, than those in the upper part of the body to support the depending column of blood, and to counteract the effects of gravity. Hence the vessels of the newly formed granulations, being weaker, than those originally formed, are unable to support the column of blood, when we walk or stand erect; and this is the reason why in ulcers in the legs, the blood sometimes burst the vessels. In others tho' the vessels dont give way, yet the parts are too weak to carry on circulation and the sore becomes of a livid colour, owing to the stagnation of blood. In this state of weakness the parts may be stimulated, with Tinct Camphor or alcohol. If the vessels become varicose use a roller. When a rupture of the vessels take place, a bloody serum or mucus is discharged, wh. acts as an irritation to the new and tender granulations, Inflammation comes on and the secretion of good pus is diminished. If this discharge is not soon put a stop to, the granulations slough off, the symptoms return, and the sore is enlarged. The best cure is a horizontal position, the patient should be confined on his back in bed, and kept perfectly at rest. When this cannot be accomplished a roller or bandage should be applied, wh. is the best cure in ulcers of the legs. It prevents an over distention of the vessels. Bandages are of three kinds, 1st. the laced stocking 2d. strips of leather or linen spread with adhesive plaster 3d. the roller. A laced stocking would answer every pur

+ from what the granulations arise —

pose, but it is too difficult to obtain. the use of a bandage is when we wish to prevent the vessels from being overstretched, by the volume of blood, the second impediment to the cure of Ulcers is Oedema this is preceded by the adhesive Inflammation, which forms a basis for the granulations, by uniting the cells of the tela cellularis or + . the watery parts of the blood is thrown out into the cells of the cellular membrane, distending the sides of the sore, and putting the vessels upon the stretch, wh. presses against the granulations, and if the distention is long kept up, they will be apt to slough off. the Oedema generally subsides at night, and the damage done during the day is repaired, In this way it will often continue for sometime while the Oedema continues destroying by day, what is gain'd at night. For the cure rest and a horrizontal position are necessary. If this is not sufficient a roller must be applied. Some authors advise the patient to take a degree of exercise after the application of the bandage. It is certain that the parts will sometimes heal speedily under this treatment, but much sooner if the patient be kept quiet the situation is a matter of great consequence. the bandage should be applied in the morning before the patient gets up, and consequently before the legs swell. the third impediment is that method of treatment which some Surgeons call dressing to the bottom, it is by pressing lint or other substances, to the bottom of the wound. This is a

There are Eight kinds of Ulcers

1st Inflammed —
2.d Fungus
3.d Adhesatous
4 Sloughing
5 Indolent
6 Carious
7 Varicose
8 Constitutional or Local —

very hurtfull practice as it must tear the uniting parts and keep them asunder, and consequently prevent their healing. All such dressings act precisely as a pea in an issue, I might just mention different kinds of powders, salves washes &c but it is unnecessary. All stimulating salves are to be avoided, these either bring on Inflammation, or by their acrid qualities act as corrosives By the removal of these unnecessary dressings, we put the sore in a state of healing. This way of dressing was the ancient mode of treating fistula in ano. Whatever impairs the health constitution independent of specific diseases, is an impediment to the cure of ulcers. the use of spirituous liquors, act in this way; as we see ulcers in people who are frequently intoxicated, very hard to heal. Hot or cold weather retards the cure of ulcers. Fevers are hurtful, the febrile action sometimes cure ulcers I have seen ulceration as large as the palm of my hand after resisting every treatment cured by a fever. the simple state of the constitution, has been supposed to have an effect in the cure of ulcers, Observation proves the truth of this in general, as the parts are able to go thro' their operations better, tho' I think I have seen them heal equally well in both constitutions, I shall now speak of the different kinds of Ulcers under the following heads.

1st of the Inflamed Ulcer. These are known by the pain and soreness, swelled edges &c are accompanied with an increase of heat. the pus changes, or instead of pus

[illegible] Charge in different [illegible]

[illegible]

they discharge some serum which has a purulent appearance, and coagulates over the surface of the sore, adhering slightly to the granulations.

Treatment If there be much inflammation Low diet, purging &c are necessary. Bread & milk poultices are the best applications to the part, and the patient should be kept in bed. when the patient is too weak to admit of evacuations, and the ulcer is situated on the leg, the foot may be raised to favor the return of blood, this acts as a local depletion without depriving the constitution of its blood. I have seen this accelerate the cure considerably. When the Inflammation has subsided it may be treated as a simple ulcer in a sound part.

2d Fungus Ulcer These have large granulations with round tops, wh rise above the surface of the surrounding parts and have no disposition to heal or to form skin, and are sometimes possessed of great sensibility, and bleed from the slightest touch in other parts they have little or no sensibility —

treatment. they may be drawn together by strips of adhesive plaster, or by simple compresses and secured by a roller which presses the granulations together, and prevents the growth of fungus. If this should not be found sufficient the excrescence may be destroyed by lunar caustic, a astringent sometimes answer the same purpose.

3d Oedematous ulcer. In Oedematous ulcers there is an extravasation of serum into the cells of the cellular membrane. the granulations become of a purple colour.

+ Purple then Black —

If the patients strength be much reduced, evacuations will be improper, the Edema can frequently be brought down by strips of Adhesive plaster and raising the leg to an horizontal position. If this does not answer, it may be remedied by means of a roller which should be wound from the extremity upwards.

4th. Sloughing Ulcer In these the sloughing frequently arises from weakness in the granulations. In some old ulcers when the granulations have risen to a level with the sound skin they become of a Black colour, Mortification comes on and the parts slough. Sometimes Mortification does not stop even at the edges of the sore, but goes on sloughing at one part, while the skin forms at another, In general the mortification takes place over the whole sore. This is usually attended with febrile symptoms, but if the granulations die thro' weakness they should be dressed with poultices, combined with Tinct. Cinchonæ. The part is ~~very~~ generally very sensible to the touch. Ulceration sometimes comes on both legs at once one breaking out while the other heals. this proves that it does not depend upon a weakness of the constitution, or both sores would be affected at once. In some cases from weakness, we should use Bark, Opium, nourishing diet &c. When the mortification has stop'd, carrots grated and boiled in milk may be used. To correct the fetor, the fermenting poultice mixed with charcoal. Sometimes whilst mortification is going on extensively (especially in warm weather)

Carbolic Poulice in night
Blood all over the Parts

Maggot —

× by Ulceration, by pouring into wide
+ so as not to be as Carbolic
× Lava +

Maggots, will be formed in the dead parts, to obviate this the dead parts are to be washed over with the Nitric of Muriatic acids diluted with equal parts of water. After the slough has seperated adopt the common treatment. I shall now speak of Ulcers wh. occur not unfrequently in weak constitutions, they generally look very well at first, the granulations form rapidly and rise to a level with the true skin. But our hopes are soon frustrated for the granulations soon change their appearance, and become of a purple colour, and a part of them are removed by Ulceration. the patient should have nourishing diet and take the Cort peruv Cold water may be poured over the sore for 4 or 5 minutes every day, a weak solution of lunar caustic, put upon lint and applied, has been found useful, also citron Ointment, Lint dipped into a solution of oak galls, to which Laud was added, and applied to the sore has sometimes cured Ulcers that have resisted all other remedies. ——

5th **Indolent Ulcer.** Where nature has been frustrated frequently in her attempts to perform a cure, the parts become indolent, and when the Inflammation is reduced. the edges remain in a callous tumified ring, in consequence of the coagulable lymph, not being absorbed, when the Inflammation was removed. **Treatment.** the best plan of treatment is to remove the callous edges after the Inflammation has subsided, and so change the disposition of the sore, to that of one from an accident

Without de to the middle

Capture nine
Wid Cin
Red Cr

This may be done by the knife or Caustic; or it may be done by means of bandages and pressure. Mr. Baynton says the adhesive plaster will mostly answer. When the caustic is employed we should persevere in the use of it to the middle of the sore, and it will be sometimes be necessary to apply it over the whole surface of the sore, untill the ulcer puts on a healthy aspect taking care after it begins to heal, not to apply it near the edges or we shall by that means destroy the granulations, and prevent the cure, making the ulcer larger. Under this head I shall speak of mercury. Mercury is sometimes very usefull in the cure of sores, given in small doses; but if this is found insufficient, we should increase, the dose so as to induce a gentle Ptyalysis. the ℞ Myrrh is sometimes used, or we may apply a solution of lunar caustic to the part, or it may be sprinkled with red precipitate Ung Citrinum &c

6th Carious Ulcer. Here the dead parts of the bone becomes a stimulous to the absorbents to seperate the the dead portion. I do not pretend to enter into a discussion of the causes wh produce exfoliation of the bone But I may observe, that as soon as any portion of the bone becomes loose, it ought to be immediately removed if possible, but when the bone is situated in the more fleshy parts, it is difficult to determine whether it be loose or not, especially if the piece be large.

By the moisture of the parts will make the sponge swell —

By a sponge tent, is a piece of sponge put into Bees wax & prepared very tightly together, & introduced into the wound, the moisture of the parts will make the sponge swell, & then a larger introduced & so on —

It may however be discovered by the introduction of a probe. if the bone be tight no pain be left on pressing with the probe; but if the bone be loose great pain will be caused by a very little motion in consequence of pressing the dead part upon the new and tender granulations. If blood follow we may beleive the dead portion to be loose If the bone be loose in order to extract it, it is frequently necessary to make an incission. A sponge tent often answers however to dilate the orifice very effectually. One or the other of these methods should never be delayed when practicable to remove, for granulations taking place, forming a substance nearly of the consistence of bone which increasing and encasing the dead bone prevents its removal. Sometimes the exfoliated piece is to large to make an incision for its removal, because if we divide a vessel in so hard and callous a part, it will be very difficult to take it up, to avoid this danger it is better to break the bone with a pair of strong nippers after which the pieces can readily be extracted. In a case of a carious ulcer of the lower jaw, which irritated the masseter muscle to contract, so that the mouth was kept closed, cartalage was formed in the same manner, so that the jaws could not be opened, occasioned by the carious bone. the surgeon not understanding the case, sent him to town, to have it dissected supposing an adhesion of the parts had taken place.

7th. THE VARICOSE ULCER. Is that occasioned by varicose veins, and very much resembling ulcers of the indolent kind. the vena saphena, most generally becomes varicose

at the three point —

I. Instruments the forceps etc to be provided with by a physic of forceps —

II. says unloosing the tourniquet will answer

for the three —

III Dr. Physick, says unloosing the tourniquet will answer every purpose —

and prevents the Ulcer from healing, they may be often remedied by a light bandage or stocking, but this is to be continued so long, that the patient is tempted to leave them off to soon, before the cure is compleated. This may be superceded, by an operation performed, by tying a ligature round the vein so as to take off the column of blood. the practice was revived of late years by Mr. Hunter, and afterwards by Mr. Home. I shall read you the treatment proposed by Mr. Home. In proceeding to the operation he recommends the patient to stand on a table on which is placed a chair, and to lean over the back of it, in this way the veins will be compleatly distended, and the ham will be at a convenient height for the surgeon. But in this way it is often difficult to get the light to fall on the part, and the patient not knowing the degree of pain attendant on it is mostly restless or discontented, I there apply a tourniquet upon the thigh to compress the ~~thigh~~ vein without affecting the artery, by which means they become distended and the operation can easily be performed. the vein may be tied up in the ham. In order to do this the surgeon must pinch up the skin on one side of the vein, and an assistant on the other the skin so raised is to be divided over the vein, with a scalpel which will sufficiently expose the vein. A silver needle with a blunt point, is to be armed with a ligature, and passed around the vein; and the patient placed in a horizontal position before the vein is tied, to force it from all its Blood, I apply a small piece of linen rag over the vein directly under the knot, formed by the ligature.

We say the
partial adhesion of
tons on the
sometimes small branches
the holes are opened and
he were to the bum

Worm eaten the heart by
effect free fire

so that when the sides of the vein have united, the ligature may be cut away without injuring the vein. The ligature will generally come away the 9 or 12th day; but it is not necessary that it should remain so long. In common the ligature may be cut away about the fifth day. After the ligature is secured, the edges of the wound may be brought together by adhesive plaster, and a pledget of lint applied so as to press upon the vein above & below the ligature. If the Vena Saphena be divided, both branches of it must be ~~divided~~ secured. Sometimes both of the trunks of the saphena are affected, and require to be tied up. but it will not be necessary to tie both when but one is affected. ~~| Ulcers & fistulae~~

8th The eighth species are caused by constitutional or local circumstances, and continued by a peculiar diseased action as Venereal Ulcers Scrophula Cancers &c. These may be remedied in two ways. The first which is entirely local may be cured by cutting the diseased part out by the knife. but if one speck is left after the operation, as in venereal buboes cancers &c the parts spread like a ring worm and require the frequent use of Caustic

2d When the constitution continuation of the ulcer depends upon any constitutional injury, that the injury must be removed before the Ulcer can be removed or cured.

I shall now proceed to speak of Fractures

Lecture 9th of FRACTURES A Fracture is a complete solution of continuity of a bone, occasioned, mostly by external violence. but this however is not always the case.

× and olecranon are concoid ——

Occasionally a concavity

A Mr Gathrie

attach at their extremities —

because the patella is sometimes fractured in consequence of muscular contraction alone, and the humerous is often fractured in the same way.* Bones are supposed to be more brittle in frosty weather, because slight falls then easily produce them. But it is more probably owing to the more powerfull contraction of the muscles in cold weather, for instance when we walk over Ice, the muscles contract when behemence, and a sudden slip or fall occasioning them to act with greater force, frequently occasioning a fracture. this is proven by intoxicated persons, who seldom break any of their bones by slipping or falling, wh. is owing to the greater relaxation of the muscles

If a bone be broken obliquely* it occasions great pain, on account of the sharp edges of the fractured extremeties piercing the soft parts, and causing convulsive action of the muscles, and when cured the limb is frequently shorter than the other, owing to one part of the Bone passing over the other. The limb readily admits of at the fractured part, and is often distorted.

FRACTURES are either simple or Compound. A simple fracture is when only the bone is broken without any external communication. A Compound fracture is when there is a division of the surrounding parts, so as to admit of external communication with the cavity of the fracture. If the external communication be small it frequently heals by the first intention, reducing it to a simple fracture, it has been called a Compound simple fracture.

× When we are going to set a limb we should place the patient in such a situation as the muscle will be most relaxed - - - - - -

where the muscle will be most relaxed

×× till he faints

as till the patients faints

bound with linen

at the end of 4 or 10 see if all is right if not tell us

can by to mother

/

×× as the bond of union is only cartalaginous

Of Simple Fractures. In the treatment of a simple fracture of the extremeties, the limb should be placed in a state of relaxation,* and the end of the bones brought into exact position. In general the convulsive action above mentioned ceases, when the limb is reduced. This in generally is easily effected, but when it cannot be accomplished by the ordinary means, the patient may be bled ad deliquium.* If much Inflammation supervene, it should be reduced by B/ and the antiphlogistic regimen, as purging is very inconvenient, it should be employed just enough to keep the bowels open. The limb should be kept in its position by means of Splints and bandages. Splints are stiff firm substance and are of three kinds. Wood, leather and Pasteboard. Of these the last are preferable, because it can be moulded to any figure by wetting it in hot water, and adapting it to the part, and when dry it Maintains its figure. We have are very often not called to the accident till several days have elapsed, and considerable degree of Inflammation has taken place, this should be reduced before we attempt to reduce the limb. by B/ low diet and the applications of lead water poultices, as unguis does not take place, when much Inflammation is present. I may venture to propose this as a general rule, that at the end of eight or ten days after the first dressing we should always examine the part. if any displacement has taken place and an alteration be necessary you may make as much as you please,* the patient should be kept to a low diet and B/ in proportion

Fractures differ as to the age constitution & situation

fractures differ as to the age, situation or the

there are some fractures that will not unite but make a kind of an unique

and form an unique like union ----

union never begins to take place under the weeks

to the inflammatory symptoms. If the patient constitution be unhealthy or weak, it may not be necessary to deplete at all. The dressings at first should be extremely loosely applied, or else if the limb swell the circulation may be stopped and so produce mortification. The time necessary to the healing of fractures depend upon the age, constitution &c. place of fracturing, likewise upon the size and situation of the Bone. The Bones of ~~old~~ young people heal sooner than old ones, fractures of the jaw or ribs heal sooner than those of the fibula, the bone in some constitution does not unite at all. Cases of this kind were cured in the P. Hospital by removing the broken limb so that the extremities of the bone might rub against each other; this was effected by making the patient support himself upon crutches and moving about, to bear as much as possible upon the injured limb wh irritation seemed to rouse the process necessary for the formation of bone into action. This method very much accelerated the union. By this irritation the adhesive inflammation, is produced, coagulating lymph is throw out which soon becomes vascular, then cartilaginous, and lastly bone itself. Mr. Wanter says that when the bones will not unite, to make an incision down to the bone, but he does not tell us of ever having such a case. It has been recommended to make an incision down to the bone in such cases and amputate the fractured extremities, in the same manner as in wounds of the joints, But this is a very dubious painful terrifying & cannot be performed in all cases, as in fractures of the

leg & fore arm, I would rather advise to pass a seton between the divided ends of the Bone, which is a much simpler method, attended with much less pain, & inflammation, and can be readily performed in any situation. I have performed the operation in this manner with very good success. It was done by passing a needle armed with a skein of thread, or silk, between the divided ends of the Bone this by irritating the part caused suppuration, and granulations and in 12 weeks time the patient complained of much more pain in bending the arm at that place, these granulations soon united leaving only the small hole of the seton, which healed in a few days after the seton was removed. In old people it should be kept in a long time, for it appears to me that the soft parts round the bone begin to ~~heal first~~ form from form the Bone first. Simple fractures, mostly unite by the first intention. Union of bone mostly requires more time than union of fleshy parts. The coagulable lymph first becomes vascular, then cartilaginous and then bone. In this way the substance called callus is formed, which being of a larger diameter forms a tumor round the Bone at that place, but it gradually diminishes becoming less and less, till it differs but little from the Bone itself, at first the granulations are full of vessels. If the wound be greatly inflamed union by the first intention fails Suppuration and granulations supervene, and the granulations when formed and examined, are to be vascular only at the extreme points, the other part being of the nature of Bone

In compound Fractures. the first bond of union is lost as the blood, as the blood which effects that union escapes thro the external orifice. Compound fractures sometimes partakes of the nature of a simple incision, but much oftener however they are punctured lacerated or contused, the fractured ends of the bone being so blunt as to tear the soft parts. again the soft part are very much bruised and the bone broken in several pieces, by the immoderate force applied, as when it has been run over by a waggon, or any heavy substance falling upon it. Fractures, may be transverse, oblique longitudinal, or spiral. Compound fractures are sometimes attended with a profuse hemorrhagy. When much blood issues we should apply the tourniquet on the principal artery. When the blood is thus stopped, we should then determine whether the limb can be saved or not. If it be so torn or bruised that the circulation cannot go on to the extremety. Amputation must take place. This may be done immediately or wait till the soft parts slough away, and then amputate the Bone. If Amputation be necessary I would advise it to be done immediately, as we sometimes by that means prevent tetanus, and the patient is more willing to submit to it at that time than any other. In Amputation, sometimes considerable hemorrhage takes place from the medullary beseels. Dr. Gooche, mentions a case in which the stream of blood, flowing from a medulary in the tibia, was equal in size to a crows quill, as it ran in a long canal in the tibia. he proposed making two perforations, near the end of the Bone

with a small tenaculum, which was agreed to & the artery by this means laid bare and secured by small perpendicular pressure. but I have found in Amputations of the Medulary artery, or arteries, the column of blood effectually stopped by a cedar plug being thrust in beside the artery, so as to compress the orifice compleatly together, and left so for 30 or 40 days, till union of the sides have taken place. If the Bleeding take place from any part of a compound fracture in the leg, and cannot be stopped by any other means the femoral artery must be tied up. When the Inflammation is great, it demands our attention for if Inflammation is suffered to run on, to the suppurative stage the patient will be greatly weakened by the discharge of matter his constitution becomes much emaciated & hectic fever comes on When the discharge is very great & hectic fever has come on Amputation is adviseable.

Lecture 10th. Fractures continued. In compound fractures we should endeavour to remove the splintered portions of the bone when any, if it can be accomplished readily. But if the pieces are attached so as to occasion much pain in extracting them, we should omit it, till the process of exfoliation has completely taken place. It sometimes happens that the external communication is very small, so that the blood coagulates in the orifice completely stopping it up, and renders the cavity perfect, so that the bone unites as in a simple fracture. But if with too much officiousness, with a view of assisting nature, and the surgeon be very careful to wash out the coagulum. the fracture

would then be rendered a compound one again, and go thro' the process of Suppuration and granulation. If the external orifice be very small, a portion of dry lint may be bound on it, which will become wet with the blood, dry and form a scab. After the Bones are reduced, when the ends are not splintered, the edges of the wound should be brought into contract and secured by means of adhesive plaster. Had a case of a compound fracture of the tibia where the ends of the bone, had made their way thro' the contiguous parts. the incision was an Inch and ½ in length. Nothwithstanding it united as a simple fracture and the patient got well in about 6 weeks. If Inflammation runs to high it may terminate in Mortification. to prevent this occurence from Inflammation we should V.S and apply bread & milk poultices. the V.S should be used as often as it is indicated. Some surgeons are fearful of large evacuations, at first on account of the copious discharge, which takes place. fearing that they should reduce the patient to much, not recollecting that the ~~discharge~~ Inflammation which preceds, is the cause of the discharge of matter. But it is necessary to distinguish, mortification occasioned by Inflammation, and that which is produced by weakness. If it be occasioned by weakness, Opium Cerh. arse. &c. should be administered. If mortification be brought on by Inflammation in compound fractures apply a Blister.

It will here be necessary to distinguish between that mortification which is produced by the part being killed in consequence of the violence applied. and which is the

// tho' they are generally fractured by a ball

the Cranium is generally fractured by Gun Shot wounds

effect of Inflammation, induced by the violence. As the part in the first, having lost their life must necessarily slough. Bones cannot bear as great a degree of Inflammation without loosing their life.

Of Particular Bones and first of the Bones of the Nose.

These Bones thought not as frequent as others are nevertheless broken sometimes. Sometimes the fragments are pushed into the nose, which changes the voice and occasions a difficulty in breathing. When in this manner they may be reduced, by introducing a narrow spatula or something of the kind into the nostril. and when reduced it may be obtained it to place by means of a Gum Elastic Catheter if it be necessary. If they project outwards, they may be kept in place by means of leather straps spread with adhesive plaster. If the soft parts are injured apply bread & milk poultice.

2 Of the Lower Jaw. Fractures of the Lower jaw occur sometimes at the symphysis, but most commonly they occur at the side and in one side only, tho they sometimes happen in both. They occur most commonly between the chin and ~~symphysis~~ process. the coricoid process are seldom broken, because they are so well defended by Muscles, and I never saw but one fracture of the condyle. We can easily tell when it is broken, tho the fragments are ever so little displaced. by rubbing the finger along the bone. it will occasion pain and the patient cannot press the jaw against the other. When the fragments are displaced. if we look into the mouth, the rows of teeth are uneven. When the fracture is on both sides. the

Digastric muscle will draw down the symphisis while the temporal muscle draws the angular part upwards. treatment. Some surgeons advise pasteboard to be applied on the jaw, to keep it in its place: but the upper jaw acts as a splint, to wh. the lower one may be fixed by a roller. Apply the teeth directly together, having the rows exactly over each other, and confine the jaw with a roller. that which is mostly advised is one with four heads, applying the body of the roller, over the anterior and under part of the chin, then drawing 2 heads, directly upwards over the top of the head, and the other two heads from the anterior part round the occipital bone and forehead alternately. I prefer a simple roller, it will answer every purpose. The patient should be kept upon spoon victuals and forbidden all conversation and should not move his jaw for several days. the dressings should be continued for about three weeks, by which time union will have taken place. Not unfrequently the teeth are loose and authors have advised under there circumstances to extract them. This should, upon no occasion be done, for fear of making a compound fracture. Compound Fractures of the lower jaw are mostly accompanied, with the death of the ends of the bones.

BONES of the Spine.

When the processes of the Spine are injured, the consequences to be apprehended are not serious. When the spine is injured there is always an extravasation, of blood, from the vessels at

that place, which extravasation presses upon the spinal marrow. Some have advised to make an incision down to the bone to discharge this effusion, but as it is very uncertain whether it is posterior or anterior to the spine, and if the latter it cannot be of any use. I would not advise it When the injury takes place in the neck, above the third vertebra which it commonly does, the patient shortly dies, generally about the third day. A paralysis of the lower limbs & Bladder comes on, so that the patient cannot void urine & scarcely forces, and breaths with great difficulty; as it is only the diaphragm which carries on respiration; it is dangerous to lay the patient on his face any length of time, as thereby the pressure on the abdomen would force the abdominal viscera upwards, and prevent the decent of the diaphram. If the injury happen lower down the patient may survive a longer time, but I have never known a case of this kind, from which any one recovered. the patient is compelled to lie on his back, and the parts on which he rests mortifies. When injuries of this kind have occured in the neck, distention has sometimes proved serviceable, though this is always of little service, yet for the satisfaction of the friends of the patient, we may put it to the trial. "To effect this we must pass two bandages around the head, one from under the chin over the top of the head, the other from the occiput, round before it & secure it together. An Instrument is then formed, fig 1st in the plate, being excavated where it rest upon the shoulders, and having a screw at the top, and a hole in

the piece directly under the screw, to admit of the end of the bandages. In this manner the extension is made against the shoulders, previously having put a pad under each, by stretching the bandages in consequence of turning the screw above. The patient in the hospital appeared to die of the mucus collected in the trachea, and obstructing respiration; owing to the weakness of the respiratory force.

Lecture 11th. Fractures of the Bones of the Pelvis. The Bones of the pelvis are very seldom fractured, owing to their great strength. Tho' I first saw the dorsum splint tho'. the patient cannot stand up, suffers great pain conveying a sensation as if he would fall to pieces. upon motion of the part the crepitus may be heard or perceived. Treatment. All that is necessary to be done is to confine the patient in one position, and that should be the most easy, and pass a roller round the pelvis, according to the nature of the case. Fracture of the Ribs. These are seldom fractured individually. sometimes 4 or 5 are fractured at once. the most common cause of fractures of the ribs are falls or substances falling upon us. I have seen many from the falling of masses of dirt. Fractures of the ribs are generally attended with great pain, the patient takes a long inspiration. A hacking cough is mostly concomitant symptom. By applying the hand upon the side when the patients cough, the crepitus may readily be perceived, and if the lungs be wounded the patient expectorates a bloody mucus, and air passes into the cavity of the thorax. This when it takes place only in a

+ And upon the upper part of the Rib, to avoid the intercostal Artery

small degree is of no consequence, there will be a small irregularity or angle at the place of fracture. If you press on the angle it is of an irregular shape and gives a crashling noise. Sometimes a swelling of the body takes place called Emphysima. It is occasioned by the air passing from the lungs into the cavity of the pleura, which at every expiration rushes into the cavity of the cellular substance and sometimes makes its way over the whole body. When the Emphysema is partial, a cloth wet with brandy may be applied to the emphysematous part and confined by a roller Dr. Hunter has published an account of the treatment of such cases in the 2d. Vol of the London Medical Observations, wh. I wish advise you to read. It sometimes becomes necessary to make a puncture into the cavity of the Pleura to discharge the air. When this is done it should be done between two round ribs or else we may let air to the fracture and convert it into a compound one. It should be done moreover mid way betwen the sternum and spine. It frequently happens that in the lungs is so small that the bone unites like a simple fracture. The air in the cellular texture, may be left out by punctures if it become necessary, tho' it never produces inflammation, as I shewed when treating of wounds.
In the treatment of fractures of the ribs, wide bandages should be passed round the thorax, so as entirely to prevent the motion of the ribs. If great inflammation supervene treat it as peripneumonia. Wide bandages

+ and Lequoise —

should be passed round the thorax to prevent their slipping down. For the cough which remains afterwards the patient may take a spermaceti mixture or a solution of Gum arabic in water combined with Laud sometimes small doses of laud are serviceable. In about three weeks union will have taken place between the fractured ends of the ribs.

Fractures of the upper extremities & first of the Clavicle

The clavicle is most frequently fractured about the middle, and it generally slopes from the scapula inward and downward. When it is broken in the middle a displacement of the fragments of the scapula takes place downward & forward, with seldom any displacement of the sternal part. The former being most commonly below the latter. The weight of the arm causes the first and the action of the pectoral muscle the latter. Respecting the length of the bone its shortness may be attributed to the contraction of the pectoral muscle. If the clavicle be broken within the ligament at its connection with the coracoid process, it cannot be displaced, and is frequently overlooked by the surgeon. This circumstance should be well remembered for by overlooking it, the little motion it is allowed may prevent its healing, and produce an abscess, and thereby cause a compound fracture. But if it be broken in the middle, the crepitus may be easily felt, upon causing a motion of the arm. A patient, with a fractured clavicle cannot raise his arm; and likewise the shoulder, on the side with the injury, will be much lower than the sound side.

Treatment. The treatment of fractures has been greatly

improved by Mr. Desault. Formerly they used in fractured clavicle to seat the patient upon a stool, and saw an assistant, standing behind him, to place his knee between the patient shoulders, and take hold of his shoulders with his hands, to pull them back for the purpose of making extension, compresses of tow were then applied under the arms, and a bandage applied over one shoulder and under the other in the form of fig 8, and the patient hand supported by a sling. But in this mode of treatment there is nothing to prevent the pectoral muscle from drawing the scapula fragment downward, and under the sternal one. Thelenie this is the present mode of treatment in England. This method, is however of no service, & attended with one great inconvenience, viz excoriation of the axilla. I shall now speak of Desaults method. to prevent the scapula part from passing below the sternal one" a pledget of lint or compress, should be applied under the arm and secured by a roller. This roller should be passed several times round the body to prevents its slipping down. The pad or compress enables the arm to act as a lever to the clavicle and effectually prevents one fragment from passing under the other, the pad may be of Muslin or flannel, the latter answer better. An other bandage is to be applied round the body and over the arm, drawing the elbow close to the body, sufficient to keep the extension of the clavicle. It should have one or two turns over the wrist to support the weight of the fore arm. Or a strap

x for if the circulation is stop the limb will swell and mortification come on

11 for if the circulation is stop the limb will swell and mortification come on

may be passed round the wrist and pinned to the other bandage, to support the weight, A piece of soft flannel, should be placed between the wrist & body, the weight of the arm should be supported rest. For this purpose an Assistant should take hold of the elbow and push the arm upwards, this done a bandage should be passed round in the figure of 8, beginning as follows, lay one end on the breast, pass over the fractured bone, under the elbow, and over the same bone again, the end of the Sash under the opposite axilla, across the breast, and so over the fractured bone again pursuing the same course as before, the should then feel the pulse to see if the circulation goes on rapidly." The bandage should be continued about four weeks, by which time union will have taken place. tho I would advise, to continue them one week after this, as the union will consequently be very weak.

Fractures of the Scapula

The symptoms of a fractured scapula, are a drooping of the shoulder pain & crepitus, the acromion process, is sometimes fractured tho not often, but whenever this takes place, it is to be treated exactly after the same manner as a fracture of the clavical. It may be replaced by pushing the arm upwards, the fore arm may be bend on the humerous & the bandage passed as before mentioned. The dressings should be continued about six weeks. I never but once saw any other part of the scapula fractured and that was nearly at it's inferior angle, and fractured transverely, from the base to the Inferior Costa. This fracture was easily discovered by rubbing the finger along the Costa

× and the fragments are seldom displaced

~~the fragments are~~ seldom displaced

from the hand, because swelling

|| Dr. P. says the roller should be passed from the hand as, swelling often takes place — the pulse should always be felt, to ascertain whether ~~the~~ the circulation be stopt —

and when the scapula moves the lower fragment remains still. When fractures of this part of the scapula occur & when the lower angle is broken off it is drawn a little downward and forward by the action of the serratus magor anticus muscle, while the superior is drawn upward by the teres magor; to remedy this the hand should be brought forward to the other shoulder, which draws the scapula round, so that the broken edge will come in contact, with that of the fragment. Bandages should be passed round the arm and shoulder, to secure the motion of the arm & keep it in disposition and prevent its moving the scapula.

FRACTURES of the Humerus this is most frequently broken about the middle.* when fractures happen about this place, there is no difficulty about ascertaining the situation of the fracture. The patient cannot raise his arm nor move it in any degree. It bends in any direction, and if extension be made the crepitus may be heard or felt. An assistant should seize hold of the condyles, bending the elbow, and drawing it a little way from the body, to put the muscles in a greater state of relaxation, another assistant should take hold round the patient, under the axilla, or take hold of the other arm to make counter extension, the surgeon should then take hold of the arm and place the ends of the bones into contact this done a roller should be passed round the arm, from the elbow to the shoulder** the length of the splints; it should be pretty tight making a moderate degree of pressure, tho not so tight as to stop the circulation. three splints are sufficient to keep the fragments in their proper places. these should be of paste

and arm, and the end of 8 or 10
above the insertion of the deltoid
muscle the are generally trans
verse tho' they are sometimes
oblique

-board, the splints are to be secured by another bandage. the fore arm now remains to be supported. this is done by a sling, or by passing a broad roller round the body + having previously made a compress or pad to apply under the arm, for the purpose of making the side level for the support of the arm, the bandage for the support of ~~opposite~~ the arm fore, begins at the opposite side, passing under the hand, over the elbow round the body, and then pursuing the same course again, at the end of ten days, the should examine the limb. the union at this time will be soft, that if any displacement shall have taken place, it may be easily remedied, by the end of four weeks we omit the bandages generally. If the fore arm swell much, we may wrap the bandage from the ends of the fingers this is seldom requisite. Sometimes the Os humeri, is fractured near its head, the patient complains of pain in every motion of the arm, pressing the arm against the side, causes great pain the lower fragment is inward toward the thorax in most cases. I never saw a case where it was behind or before. If it be inward the elbow stands off from the body. If outward it bends inwards, toward the body When the lower fragment is in towards the thorax, a pad should be applied, close up in the axilla, between the arm and side to keep the bone in its right situation. Fractures near the head of the Os humeri have been taken for luxations, and by trying to reduce the supposed luxations have done considerable mischief, by irritating the wound, and injuring the soft parts so as to produce suppuration. This mischief may be readily avoided by placing the finger in the axilla, where we shall be enabled

a pad between the chest and arm, in 5 or 6

-ted the end of the fragment, instead of the round head of the bone Sometimes the lower fragment keeps its situation and the patient cannot use his arm, we are unable to tell the precise situation of the fracture, but by extension and counter extension being made the crepitus may be felt, by bending the arm. It is of great consequence to know whether the humerus be fractured or luxated for if the latter and the lower piece be inward the patient cannot rotate his arm as usual, if it be suffered to heal so

Treatment for Fractures of the head of the Bone.

Begin the bandage at the wrist, and wind it at the shoulder, after the extension and counter extension have been made the splints should then be applied, two of these are sufficient if they are broad and three if they are narrow, applying one on the upper part, another on the lower and a third on the under part of the arm, these are to be secured by a roller, the lower fragment is to be kept out by means of a pad which is to be made of flannel folded up and placed under the arm, this pad answer the place of a patient, this being done the arm is to be bended at the elbow & secured by a broad roller, I prefer the roller as a sling admits of too much motion. In about 4 weeks, the bones will have united. tho' we should examine it at the end of 10 days, by which time the echymosis which frequently appears in consequence of the Blood vessels being injured by the broken fragments will have completely subsided, and we are better enabled

from the wrist to the axilla

to judge of its situation. I once saw a case where there was so much echymosis that I could not feel the bones at all. Mr. Desault advises when the effusion is great, to make an incision down to the bone or fracture a cavity and discharge the fluid, but this makes it a compound fracture, and should not be done. The nature of the process of absorption will remove it. If however at the end of 13 or 14 weeks, it be not absorbed a small puncture may be made into the cavity of the the fracture to discharge the fluid. by this time the bone will have united, & we should avoid changing the fracture into a compound one, as soon as the operation is done, the edges of the puncture should be brought into contact by adhesive plaster, so that the wound may unite by the first intention. The humerus is sometimes fractured near its condyles and sometimes longitudinally at the same time so as to seperate them. When the condyles are fractured in this way, by taking one fragment in each hand and moving them backward and forward, we can easily perceive the crepitus. If one only be fractured we may discover it in the same way. Besides this the parts are so thinly covered, that the fracture may be easily felt. I have already said that when the elbow joint was concerned, to keep the arm flexed, the fore arm should be rendered incapable of motion and after the fragments are placed right, a bandage to wrap round the elbow beginning at the middle of the fore arm and extending as far up the arm. To fix the fore arm two splints in the shape off an L. each forming right angles

Dr. says that when union has progressed a little while to straighten the arm, and apply splints, which prevents the hand from hanging down

should be applied, one over the external condyle and the other over the internal condyle, then two more bend splints are to be applied one anterior in the bend of the elbow, and the other posterior on over the acromion process, the splints that extend along the fore arm should extent to the wrist. Every motion of the fore arm displaces the fragments, and must be prevented by a bandage, at the end of 10 days we should take off the dressings, and examine the limb, at the end of 10 days more the dressings should be taken off and the arm gently flexed, after the 20th the dressings should be taken off every other day and the arm flexed to prevent a stiffness of the joint. The Olecranon process is at times fractured It is mostly caused by falls on the elbow and is always transverse. When it is fractured the patient is not able to extend the fore arm, because the triceps muscle which extends the arm is inserted into the detached fragment. The upper fragment is drawn a little upward, by the contraction of the muscle, and you may move it from side to side. Treatment. the fore arm must be extended, and the process being placed in its proper situation is to be secured, by bandages, beginning at the wrist & winding to the shoulder. When the bandage has got near to the elbow, the surgeon must feel if any portion of the skin has got between the divided edges of the bone. the bandages are then to be continued on. A splint should then be applied on the anterior side of the arm to prevent flexion. after 10 days we should examine the state of the fracture.

In flexing the arm care should be taken not to force the joint when both bones are broken, at the, separation or pronation, the bandage must not be too tight as it will pinch the bones on each other —

and after the 20th day we should remove the dressings daily and gently flex the arm in order to prevent stiffness of the arm which sometimes happens the dressings should then be continued about 15 days after the perfect union takes place.

Fractures of the fore arm. The bones of the fore arm are frequently fractured and the radius much oftener than the Ulnar, the Ulna being very seldom broken alone. the Radius is most commonly fractured at the wrist when the Ulna is not broken with it. No difference here can be seen in the length of the radius, all the difference that can be seen will be an angular projection at the fore part of the wrist, the fracture is so uniformly so low, as to be taken for a luxation. the Surgeon will put the arm in a sling, and union will take place causing an ugly projection, and the patient cannot rotate the arm as usual. We may distinguish between them by the crepitus but besides this the crepitus cannot always be felt We may know by the tubercle at the lower end of the radius, not being opposite to the styloid process of the Ulna as usual. It sometimes happens that both are broken in the same place, whenever this happens the patient cannot flex his arm, the crepitus may be felt and the arm bend at the place of fracture, and there will be a lateral deformity caused by the bones being brought nearer together

Treatment. to bring the broken edges into contact. An assistant should take hold of the elbow, and an

the splints
to extend backwards the fingers
4 or 5 weeks — by applying
the wet plaster bandage round
keeps the flesh in between the
bones

", They are sometimes simple fractures
when nothing more is necessary
than to put a large broad splint under
the hand and pop a roller round it,
keep the hand perfectly still
Compound fractures, are more common
Care must be taken not to pop to hard on
the end of the finger for fear of stopping the
circulation, and mortification take place

other of the hand and make the necessary extension, while the extension is making, the Surgeon should replace the ends of the bones, it is done by taking hold of the arm and squeezing the flesh in between the Bones, so as to press them out. the Interosseous ligament will prevent their being pushed too far out, this being done a bandage is to be applied, beginning at the wrist and extending to the elbow. care being taken not to move the ends of the bones, two splints should then be applied, which should be wider than the arm, and should be of firm material, Pasteboard, without being wet answers very well. the splints should be covered with soft linen, and extend to the ends of the fingers the splints on the back part of the arm should be applied with the upper part below the elbow, or else the patient will pinch himself every time the arm is extended, a roller is then to be passed round the splints, and then the fore arm supported by a roller, having care to have the thumb uppermost or else the patient will not be able to rotate the hand as usual if it be suffered to heal in an other position. in the end of about 4 weeks union will have taken place. the Metacarpal bones are sometimes fractured, the extension be made by pulling the fingers, two splints are sufficient one on the fore part and one on the back part of the hand, to be secured by a roller the Phylanges are sometimes fractured, they are easily replaced and secured by four small splints, placed one on each side, and one on the back part and another on the fore part of the finger, and a roller passed round them. —

+ They are sometimes ~~oblique~~ transverse but most commonly oblique

+ and it will smell at that part

11. Mr. Pott recommends the thigh to be flex'd upon the Pelvis, and the Leg upon the thigh, but the patient complains of pain and cannot rest in that position, and the Leg is not always straight

and the patient laid upon the affected side

Lecture 13th Of the Os Femoris. Fractures of the Os Femoris occur most frequently about the middle or rather below it but sometimes above it, sometimes at the trochanter and sometimes at the neck. If it be fractured at the middle and the fracture be oblique, it be considerably shortened, the fragment of one portion passing over that of the other, in consequence of the contraction of the muscles, the patient cannot move his leg. Complains of pain at the fractured part, and upon motion the crepitus may be heard. Besides this the limb will be distorted, the toes turning outwards, and when one bone passes over the other it will occasion a lump, with some tension at that place, the lower fragment is mostly under the upper one, the manner in which fractures of these bones have been treated are very various, I shall at present shew the method which is most commonly in use the extension and counter extension, being made by a assistant the bone is to be replaced by the surgeon, and short strips of linen or muslin, placed under the thigh, are brought over and decussate each other at the top. A splint is then to be applied at the posterior and another and the anterior part of the thigh, these splints are thin pieces of cedar glued on leather, and secured by pieces of tape, tyed round one at the upper & another at the lower end, two bundles of straw are then to be applied one on the inside, which must be the shorter & the the other on the outside, and secured by tapes, to prevent the foot from turning out, a lar-

1st the objection to Dr. Physick's treatment is first, the contraction of the muscles

2d the Pain and Ulceration upon the Os Coccis — — — —

But the Muscles accommodate themselves to that situation, and the soreness of the heal can be prevented by a piece of adherine plaister —

" When the parts become excoriated and sore, the best application is Brandy —

tape is pinned to the inside bundle, passed round the foot and drawn pinned to the outer. this is I believe the mode of treatment in London it is however inconvenient. Mr. Pott supposed that the shortness of the limb which frequently happened, was owing to the muscles being in a state of tension when the limb was straightened out and therefore changed the position, ordering the patient to lie on his injured side, and have the thigh drawn upwards towards the body, and the knee bent and thereby, place the muscles in a state of relaxation. but this will be found to answer not. for often the ends of the bones will irritate the muscles, causing them to take on contraction involuntary and displace the ends of the bones. Besides this we cannot ascertain the length of the limb, since measuring from the anterior spinous process of the thigh is very inaccurate, again the posture is very uneasy, and the patient cannot lay so long on his side. to obviate this it has been advised for the patient to lie on his back and have his thigh and leg to rest in a machine some what like the roof of a house, so that the muscles might be relaxed, but here every time the bed pan is put under him, the limb will be displaced, but his son has invented a double bed, with pullies to hoist the upper one, which must have a round hole, cut thro' it to let the fæces, pass thro' into the pan, which is to be placed under the hole, this hole is to be filled with a cushion, made to fit it, but this is very complicated, and can seldom be had, it is therefore very objectionable, he has however made an improvement in

1

the bandages, having, having them short in the before described manner, so that the limb may be examined by just opening them at the top without disturbing it. All these modes are found to be inconvenient for securing a fractured femur, the body naturally descends upon the lower extremities, when treated in this manner as the patient lies in bed. Mr. Desault has greatly improved the dressings of fractured thighs, by the invention of the long splint. I shall now shew you Desaults mode of treatment, viz the bed should be made of firm boards, covered with a matthass, and the patient should have but one pillow, under his head to prevent his slipping down. there are several parts of this dressing. 1st take 4 strips, lay one just above the knee and one just below it, one at the upper part of the thigh and another and the ankle 2d a piece of muslin or linen to wrap the splints, this should be wider at the outside having the acute angles, at the outer and upper side. 3d strip bandages long enough to reach round the thigh laid with their edges in contact, so as to lap a little on each other, placed so as to reach from the perineum to the knee 4th a silk handkerchief laid so as to come under the perineum and across the pelvis to make the counter extension, the patient may be then laid upon them upon his back 5th A short splint of the length of the thigh to be placed upon the anterior part of it. 6th A small piece of leather spread with adhesive plaster, and laid

on the perineum the hair being previously shaved, to prevent any excoria-
-tion from the counter extension handkerchief. 7th Another handkerchief
to be passed round under the heel and decussated at the top of the foot
brought below it and tyed to make the extension, the same caution
is here requisite: 8th A short splint to go upon the inside of the thigh
and a long one to go upon the outside, to make the extension & coun-
-ter extension, being made & the bones placed in their proper situa-
-tion, the short strips are to be wrapped The long splint
now rolled up in the linen placed for that purpose, is to be ap-
plied to keep up the extension, the large excavated end goes up
into the axilla, the holes next are to receive the counter extend-
-ing extending handkerchief for securing it. the hole at the
other end the extending one after passing over the, that we see
in viewing the Block splint edge ways, wh is designed for
keeping the foot straight, and having the extension directly
under the foot, in a straight line with the limb, the other
short splint is to be rolled in the same manner, to reach from
the perineum to the sole of the foot, Notwithstanding the
splints are wrapped in linen, there will be when they are ap-
plied some bare cavities, which are to be filled up with some
bags of chaff, these are to be laid between the splints & leg, to
keep it steady and easy. Chaff is preferable because it can be
moved from one place to another. The short splint is now
to be laid on the Anterior part of the thigh, it should be of
pasteboard and moulded to fit the thigh. the 4 pieces

of tape are now to be tyed round the splints, in order to keep them steady. Firmer, a wide bandage is passed over the long splint, and round the body two or three times, wh prevents any motion. In this way extension and counterextension are compleatly kept up, and the patient having many point to rest on by lying upon his back, rests easier than in any other posture. We should now examine the length of the limbs, if the fractured one be short increase the extension & when the bandages get slack, they should be tightened. the fractured ends of the bones, should not be drawn, so as to come in contact at first, when there is violent contraction of the muscles. for if the extension be great enough, to overcome, the force of the muscles, for if the extension be great enough to overcome the force of the muscles it will cause great excoriation, but by keeping up, the muscles will yield to the force and are easily overcome. —

Lecture 14th. The splints now generally in use for keeping up the extension is not that originally proposed by Mr. Desault, but is considerably altered, that originally invented by him came up only to the upper portion or spine of the Ilium, and extends a small way below the foot, the inconvenience resulting, from the transverse portion of the counter extending stay, which almost always presses the upper fragment outward. I therefore lengthen the splint to reach up to the axilla, by this means the place for securing, the counterextension, could be brought to a straight line with the limb, and by placing a pad at that place, in contact, with the axilla, and portion

a counter extending force might be supported and thereby prevent the galling of the perineum, this is particularly useful in women, where the urine is very apt to get under the dressings and excoriate the parts when excoriation takes place, it may be washed with a little brandy this I have found to be an excellent remedy. Sometimes fracture happens at the neck of the femur, this may take place at the head of the trochanter or near the round head of the bone, or the head itself may be fractured within the ligament, the patient is often sensible of the crack at the instant it happens, and cannot raise himself from the ground, walk nor stand, tho' Mr. Dezault mentions two cases, where the patients could walk, the fragments had become so interlocked, the foot turns outward and seldom or never inward tho' it is said sometimes to do so. the surgeon can pretty readily extend the limb if called in pretty soon after the accident, but if a considerable have elapsed, more force will be necessary, and I believe compelled to bad delequium animi, the extremeties being brought in to contact, the crepitus may be readily perceived, there is another circumstance by which the existence of a fracture may be known, place your finger upon the great trochanter, and then rotate the limb, if the neck of the bone be broken, the rotation will appear to be on the axis of the thigh bone, or as if the bone revolved on the joint I mean a pivot, But if it be broken lower down the axis will be thrown further off, and the trochanter

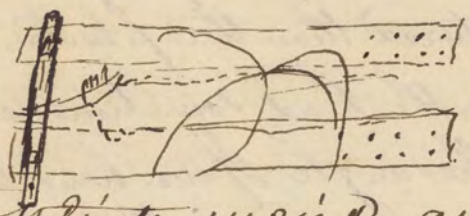
it and if luxated upwards and backward
it would take great force to put the limb in
its proper situation, and after leaving off extension
the limb would remain so, but the contrary
effect would take place in fracture —
in luxation the toes are turned inwards

will describe a much greater circle, the bone of the thigh bone revolving on a pivot, will be strongest, when the neck is fractured nearest the trochanter. If the limb be much inflamed, we must decline setting it, till the inflammation has abated, fractures of the neck of the bone heal as soon as any other part of the bone, unless when they occur between the capsular ligament, I once saw a patient with a fracture of this kind and it did not heal in 6 years, as we cannot exactly ascertain fractures at the upper part of the thigh bone. It is right in all affections of this part to apply Desault's apparatus, I would be right to inform the patient of the danger and difficulty of union, when fractures occur within the capsular ligament, or even in any part of the neck of the bone the dressings should be continued from 50 to 60 days. I have seen but very few fractures of the neck of the thigh bone, Indeed, I may say but one, in this case the apparatus was taken off in 6 weeks, when union was consequently very soft, the patient could not walk for near a year & still limps, he was not very old. I think only a sort of ligament had formed between the divided extremities. In every case therefore, we ought to continue the dressings according to Desault. Contusions, upon the buttocks are sometimes taken for fractures of the neck of the bone, they may be continually distinguished by the length of the limbs being the same. Sometimes the femur is fractured lower down than the middle.

occurring just above the condyles, the lower fragment sloping obliquely upward & backward, when it is broken in this manner. Splint applied in this way are sufficient on each side. Desault's Apparatus answer this purpose very well, a thick compress should be laid under the leg, to raise the lower fragment. At times besides being fractured above the condyles, the lower condyles are likewise seperated. Fractures of the thigh bone are easily ascertained, the thigh bends at the place, and the crepitus is easily felt, the patient cannot bend his leg, and when the condyles are seperated, the crepitus may be discerned, by grasping the condyles, with each hand, and rubbing them against each other I never saw but one case of this kind this was at the Hospital, but in this case the fragment penetrated thro' the soft parts Integuments &c. and made a compound fracture, communicating with the knee joint, and the patient shortly died Splints on each side are here sufficient. I shall now show you Dr. Wartshorn method, which is a very ingenious one, and sometimes better than Desault's, his principal object is to make the extension and counter extension, to fall in a straight line with the limb, and thereby avoid any displacement by the extension, an other advantage is in preventing the foot from turning outward, one advantage, particularly desired, from this mode of dressing, is when the fractured ends form an angle anteriorly, wh. by this manner of dressing, can be kept down completly, by compresses.

you may suppose perhaps, a bandage in the usual manner might do but it will be found insufficient, the office of the bandages near the thigh is, to prevent, the action of the muscles, and may likewise give some lateral support.

Lecture 15th. I shall proceed to day with fractures of the leg, they occur most frequently in the middle, and when transverse are accompanied with little or no displacement, of the fragment, but if the bone are broken obliquely, the lower fragment passes behind the upper one forming an angle anteriorly with the lower end of the lower fragment being drawn backward, by the contraction of the muscles. The tibia is more commonly fractured than the fibula. the occur sometimes at the upper part near the head sometimes at the middle and sometimes just above the angle, If one bone be broken only the other keeps it in its proper situation. If it be the tibia, by grasping the limb above and below, and try to bend the leg, the fracture may be ascertained, If it be transverse no displacement will take place, I once had a case of this kind, where the patient after having his limb dressed, and had been in bed 3 days supposed that I had mistaken and that his limb had not been broken, the bandages were therefore taken off and the patient walked about the room, I desired him to let me see him he did so, but the bone presently bent under him and he fell on the floor, and nearly converted it into a compound fracture. In all cases by grasping above and below the fracture, and moving the limb, the crepi-

a pillow, then strips of Linen, the a couple of splints made of Pasteboard well soaked in warm water, they are to be wrapped in linen and over these ~~spre~~ strips again. and then two splints of Wood, a bandage part round the thigh just above the Knee, and the splint secured by tapes pin'd to the bandage, and then a bandage crossd round the foot and another to be tied to the cross stick to make the extension with and a couple of small pillows  to go between the splints and the Leg - - - if these extents mind answer? Delsaults well

tus may be felt, when the fibula is broken the crepitus may be felt by moving the foot. Treatment, the leg is to be laid on a pillow, after extension and counter extension are made, and the fractured extremeties brought into contact, a roller may be passed from the ankle to the knee, but as this cannot be easily opened, to examine the leg, I prefer the strips,+ during the application of these the counter extension and extension should be kept up by Assistants, two splints are then to be applied on the inside and the other upon the outside of the Leg, and secured by pieces of tape, the splints should be of pasteboard to support the leg and keep it firm, two narrow boards are to be placed one on the inside and the other on the outside of the pillow on which the leg should be rested, and to be secured by tape, If it be left in this manner the foot will fall outward & downward. A bandage pinned to one side and passed round the foot and secured it to the other side will prevent this, a cradle, or in stead of this a couple of hoops, of a common flour barrel and about 1/3 cut out of each, and crossed at the middle, is to be placed over the limb, to support the bed clothes, with the tibia & fibula are both broken, transversely, this method answers very well, but when obliquely, an angle will be formed anteriorly, and the leg, will be shorter on account of the contraction of the muscles, In these cases, the extension & counter extension, invented by Desault has been greatly improved by Dr. Hutchison, whose method I now show you the counterextension, is made by two pieces of p[illegible] placed

on the inside and two on the outside of the leg, then a roller passed around them below the knee, so as to keep them in that situation this should not be drawn tight or else the limb will swell in consequence of the superficial veins being pressed. a silk handkerchief should be passed under the heal, brought on the top of the foot and decussated, carried below and tyed to make the extension. Strip bandages are to be placed under the heals enough to reach from the ankle to the knee, the extension and counter extension is now made, by the assistant while the surgeon wraps the bandages, two splints with holes in this manner are next to be placed, one on each side of the leg, to be passed thro' the two smaller holes, these must be long enough to reach from above the knee to be below the foot. the tape on each side of the leg, at the upper end of the splint and tyed, while a band is passed thro' the larger ones beneath the foot and secured by wooden pins. the extending handkerchief is tied to the bar, by which means the extension is compleatly kept up, two bags of chaff are to be placed between the leg and the splints, one on each side, and the leg supported by a pillow, the greatest inconvenience resulting from this mode of treatment, is the swelling of of the leg issasioned by the bandage round the knee. the foot too often swells in consequence of the lymphatics being pressed as well as the veins, this mode of treatment will not do, when any considerable swelling or inflam-

When the Fibula is broken the Astragalus is generally luxated.

mation exists, as it will tend to increase it, this is a good method for compound fractures, as it can be easily opened to examine the limb and to apply dressings to the wound, and the extension and counterextention can be preserved, when the fracture is oblique. In some instances the limb swelled so much that I was obliged, to omit it and use Desaults apparatus. Sometimes the tibia is fractured, nearly at the knee joint and fractures happening at this part, seldom any displacement occurs, but the joint is very apt to swell and become very much enlarged, and is often difficult to cure I have seen a case of this kind, where all the antiphlogistic remedies were tried, and all to no benefit, which was cured by simple extension and counterextension, and the antiphlogistic regimen, the patient should be kept in bed a long time as union does not take place soon, when they happen, the limb should not be moved for 4 weeks and the dressings should be continued for 6 weeks & then moved but little very carefully. when it is fractured at the ankle the same treatment is required. The fibula is rarely fractured at the lower part near the ankle But if broken by a blow it may be fractured at the place where the violence was applied. But the fibula is sometimes broken by abduction of the foot, & the foot likewise luxated. the reduction of it may be be easily reduced by pushing and grasping the foot and making

× by the force of the extensor muscles, but oblique and longitudinal fractures cannot happen in this way - by external violence ———

" and he can walk side ways if he is standing he falls, and he can generally hear the crack at the time of fracture - ——

there are two things which draw the divided edges from each other. 1st the contraction of the muscles which are inserted into the patella and and 2d those which are inserted into the tibia ⟶ ∴ Physick say it is better to bend the thigh on the pelvis and elevate the leg for it relaxes the muscles and facilitates the flow of blood thro' the veins and impedes that in the arteries - -

extension for a fractured fibula, the bandage should not be tight for the reason as in the fore arm, two splints are to be applied at the side of the leg to steady the foot as the cure can not go on if it is allowed to move because the lower fragment will follow the motion of the foot. In about 25 days union will be effected

Fractures of the Petella. Fractures of the petella are commonly transverse. Sometimes they are oblique. I once saw one longitudinally. the transverse are generally occasioned by a violent extension of the leg, and the oblique and longitudinally by great external violence, as falling upon the knee. when a fracture of the petella takes place. the knee becomes tumid, and the upper fragment is drawn upwards by the contraction of the muscles. the low fragment being fixed cannot move, the patient cannot walk forward, because he cannot extend his leg, but can go backward drawing it after him when the leg is extended on the thigh, the upper fragment will sometimes come in contact, with the lower, and the crepitus may be felt by rubbing the parts against each other. Treatment. In transverse fracture, bring the upper fragment down as far as you can. the patient is to be laid in bed and the trunk raised by means of pillows, so as to relax the extensor muscles of the leg. The leg too is to be elevated in the same way, when the patient is placed in this situation and the fragments are brought close, apply a bandage from the foot to the knee. An assistant

+ taking care to push the skin so that it will not
lie in wrinkles and the place of fracture
because it might get in and prevent union

then holds the upper fragment down, while the Surgeon, applys another bandage from the hip to the knee. the fragments then being brought together, a compress is then to be applied, above the upper fragment, and a similar one below the lower one, these compresses are to be secured by a roller passed round the knee in the figure of nearly 8 as follows, beginning above the petella, pass under the leg over the tibia just below the petella under the leg again and then over the knee just above the petella, and so pursuing the same course again, this is the best mode of keeping the compress being secured, pass the Bandage over the petella, so as to cover it, to prevent the soft parts from swelling. In this manner the head of the bones can be kept in contact the bandages wrapped from the foot, prevent the the leg & foot from swelling, which that of the thigh not only prevents swelling, but counteract the disposition of the muscles, to prevent the flexion of the leg, a splint reaching from the ischium nearly to the heal, is to be placed on the posterior part of the leg. It should be covered with flannel and secured by a roller, If the splint reaches below the heal the pressure occasioned on the heal may occasion ulceration. The leg is to be kept elevated elevated for some time. Some Surgeons have been afraid to bring the edges into contact, for fear of the bony matter would be effused into the cavity of the joint and produce Anchylosis. If the bandage on

" Dr. P. says that he has not made up his mind respecting bony union takes place or not.
sometimes, there are a couple of inches between the divided edges of the Patella, if bony union were to take place there, it would produce a stiff joint, when the fractured ends are not brought into contact the muscles becomes shorter, but they soon accommodate themselves and if they do not extend the Leg, immediately Dr. Hunter recommends, Exercise ——

on the upper fragment be too tight, Anchylosis will actually take place, the pressure causes an absorption of the cartilages and union takes place between the bones rendering the joint stiff, the bandages should never be applied tighter. If much inflammation exists, union will be a good while in taking place. Indeed, we can seldom bring the fractured extremeties together so close as to form a bony union." When the springs become bore, they must be renewed by the Surgeon. In longitudinal fractures, a compress is to be applied on each side & the flexion secured. Sometimes the upper fragment when no attention is paid the thigh is drawn up 3 or 4 inches, and a ligament is formed, uniting the ends of the bones together to assist in the motions of the leg. this ligament altho it has been supposed an imperfection in the Animal Oconomy, is a surprizing specimen of the perfection thereof. for if a bony matter had been thrown out and completely ossified, the knee would be entirely stiff, whereas by this ligament being formed, the patient may come to have the perfect use of his leg, by gently increasing it every day the patient should sit on a table and swing his limb as much as possible, altho he will acquire strength but slowly, yet by persevering the muscles will accommodate themselves to the extra length of the tendon, and the patient will be able to walk as well as ever. In general 6 weeks are required for union

but the soft parts without daily any food

There not being it necessary to repeat a release after 1 month -

It is proper to not use any force upon any other part until the injured one

Men

Lecture 16th of Dislocations.

When any bone forming a joint is forced out of its natural situation it is said to be luxated. It occasions the patient considerable pain & causes a very considerable alteration in the shape of the limb. In general if the surgeon is called in soon after the accident is easily reduced, the greatest difficulty we have to contend with is the contraction of the muscles, the ruptured capsular ligament does not make much resistance except under certain circumstances, the patient should be restricted to a low diet, warm bath, much force by to weaken the contraction of the muscles, after which the mechanical force will be able to overcome them with more ease, In difficult cases, I have found when the usual method fails, that the best method is to ad deliquium Animi this completely destroys the muscular force and experience proves it to be the best method. when the patient refuse this I have tried the nauseating ~~remedies~~ effects of an Emetic, or injections of the Infusion of tobacco, or tobacco smoke, have proved successfull when other things have failed. Boyer says intoxication produces the same effect and I should suppose myself it may answer very well. the muscular contraction continues to resist the reduction for about 3 weeks, after which the muscles, become accommodated to their situation, and by this time the bone begins to form adhesions, in the which the contraction of the capsule of the joint. Causes the difficulty of replacement

so that it is not necessary to ~~b~~ad delquam amini in cases where the luxation has continued more than a month. When we apply force for the reduction of luxations, we should be careful to apply it to the dislocated joints, only the limb should be placed in a relaxed state. Dislocations of the Lower jaw When luxations of the lower jaw occur, they take place forward and upward so that the condyles rest on the tubercle of the ~~lower jaw~~ temporal bone, sometimes only one is displaced the jaw is turned to one side, when both are luxated the mouth stands wide open in spite of the efforts of the patient, to the contrary, and the patient cannot swallow, the same takes place when only one is displaced. If you apply your fingers to the place of articulation, the cavity may be felt. Luxations of the jaw occur from yawning or opening the mouth too wide, sometimes causing a good deal of pain. Some years a woman in the market place, and opening her mouth pretty wide to bonferate, luxated both condyles, and to her great mortification, could not close her mouth again, and was brought 2 or 3 squares in this predicament to me to have them replaced, they were easily reduced. Treatment. In proceeding to reduce the lower jaw we must take the precaution, to wrap up our thumbs very well, to prevent them from being injured, by the convulsive action of the muscles, they must be placed as far back upon the molar teeth as possible, the fingers are to be placed

" it cant be located upwards on account of the
astronomer and Political - - - - - - - -

it cat upwards on accoun
of the Lantrula & Clarisse

are to be placed under the chin, then push the jaw downward and backward at the same squeezing the fingers upward. If the jaw is not pressed downwards, the reduction will not be so easily if done at all, I have seen great force applied directly backward, without any effect, some have advised to give a knock under the chin, this may sometimes succeed but it is apt to break off the neck of the condyles, No bandages are necessary after the reduction. Clavicul. Sometimes this is luxated, this may either take place at the sternum, or at the acromion process, I have never seen it occur at the sternum tho I have no doubt it may readily occur, on account of the superficial articulation, If considerable force be applied, so as to push the shoulder inward & forward, If it happen the patient is not able to raise his arm. Luxations at the Scapula, they may be occasioned, by the patient, being thrown upon his shoulders from a horse or otherwise, so as to press it downward, In both cases the treatment are both the same, as that for fractured Clavical. When the scapulary end is fractured luxated, we must continue the bandage for a long time, 6 or 8 weeks or else the shoulder will sink down lower than natural and form a tumor upon the top of the shoulder. Of the Humerus, It is luxated oftener at the shoulder joint than any other place, owing to its great latitude of motion, in every direction al-lowed by its glenoid cavity. It is commonly luxated

downward & inward towards the axilla, and is mostly occasioned by a fall on the shoulder, tho' I have seen it luxated forward between the pectoral muscle and clavicle, then it is said to be luxated backwards, tho I never saw, when it is luxated inward and downward, a depression can be felt, above the humerus between it and the acromion process. If you put your fingers in the axilla, the round head of the humerus may be felt. the patient cannot put his elbow to his side, he cannot rotate his arm not even raise it to his head, the fore arm is mostly somewhat flexed, he commonly has an inclination to rest his arm on something to support. I have already shew you how to discriminate between luxations and fractures of the os humeri. —

Treatment. If the surgeon is called soon, there is but little difficulty in replacing the bone, because the muscles do not begin to exert themselves immediately. I have accomplished a reduction by placing one hand upon the acromion process to make the counterexten and pulling the arm with the other to make the extension. to apply a greater force it has been advised to secure a couple of towels on the arm just above the elbow by means of a roller, then turn the upper ends of them down, but Mr. Hay's method is I think is preferable. when the arm is extended out by an assistant and the counter extension made by another place your hand in the axilla and push upwards, and at the same time suddenly press the elbow in towards the side, after you have

tried this method, if with no success bled deliquium animi, if the patient be strong this cannot do any harm, and if weak there will be no necessity for it, this completely removes the muscular action, and the limb can be reduced with ease "about 18 years since a man was admitted into the P. Hospital, with a dislocated humerus, the accident had happened 3 or 4 weeks, and the parts so much swelled that he had to remain 10 days before we could tell if it was luxated or not after trying all the usual methods to no effect, I bled him till he fell on the floor in a fainty fit, when the bone was reduced with the greatest ease, I have since repeated it since with the same good effect. after a limb has been luxated 3 or 4 weeks, the muscles become accommodated to their situation and begin to form adhesions, the best way to accomplish reduction after adhesions have taken place, is by means of a compound tackel, take two two round towels, and secure them at the middle to the arm just above the elbow, by means of a roller, turn the upper halves, down to the lower, and the ends of both secured, the rope of the tackel to make the extension the other rope to secure the tackel, is to be fastened, to a firm place, to make the counter extension, a long strap about an 1½ inches in breath, stuffed with horsehair or cotton, must be applied against the ends of the acromion process, and the ends brought round the body in a contrary direction, and made fast to some

firm place. To prevent the strap from slipping off the acromion process and excoriating, a shorter strap of roller may be applied or passed round it, by which it may be held in its place, to secure the thorax, have a round, wide strap & press it round the body, securing it by a buckel, to this have a rope, which may be held by an assistant, to keep the body body in its place, as the patient is apt to get, to one side, he should lay on his back, thus fixed drawn the rope to make the extension, and have care that the counter extension & have care that the counter extension be made against the acromion process, else the arm may be torn from the chest and it is therefore of the greatest consequence to make the counter extension against the acromion process. In making the extension, the arm should be rotated, to seperate the adhesions, which may have formed, the surgeon may have a towel, under the arm, and over his shoulders to draw the arm up, or he may put his arm in the axilla and force the patient elbow downward, with his other hand, using the humerus as a lever, the bone has been lodged in the axilla for 6 or 9 weeks, and been replaced, and indeed a much longer time, for if it is possible to displace a bone surrounded by a firm capsular ligament from a natural to an unnatural situation, should be easier to bring it from an unnatural to a natural situation But when the Bone cannot be reduced, we are

The natural situation of the Acromion is felt above it cant be luxated forward on account of the Acromion yet it may be pushed forward and then luxated - - - - - -

The natural situation of the Acromion is felt above ~~downward~~ forward it cat

And laterally it cannot be luxated forward, unlss the Acromion be broken - - - on account of the Acromion but

not to despair altogether, as a great many useful motions may be performed. "I knew a cabinet maker whose arm was dislocated and yet he was able to follow his trade, and the only motion he could not perform, was drawing his arm directly upward". I shall not pretend to describe all the machines that have been invented to reduce luxations, but only a few of them. It has been supposed that a staple fixed in the floor over head, and the patient suspended by his arm, would be productive of good effects But it would endanger tearing the arm from the chest as no counterexfion could be made against the Scapula. Another method is to grasp the arm for the purpose of making extention, the patient being down, then place the foot in the axilla, to make the counter extension, and when you make the extension, press, the arm towards the side and you foot, will thrust the head of the bone in its place I saw Mr. Winter do this very successfully, some advice hanging with the arm over a ladder. But none of them are very good methods. Lecture 17th of the fore arm.
The fore arm is luxated upward and ~~down~~ backward forming a protuberance, behind the arm and is kept flexed tho' sometimes it is luxated laterally, the coverings of the part are so thin that the Surgeon, can ascertain the nature of the case, the patient cannot flex or extend the arm, the coroceid process of the ulnar occupies the cavity filled up by the Olecranion and

Laterally but this I have
when forward there is a rising on the top of the hand
after it is reduced it is necessary to apply a splint on
the internal arm and extend it to the hand

rising on the top of the
hand —

it is necessary to apply
a splint on the internal
arm and hand —

Sandy

and what is that prevents reduction. Treatment. In order to reduce it an assistant should take hold just above the elbow and an other ~~hold~~ at the wrist, to make the necessary extension the Surgeon is to take hold just below the elbow and pull at the same time directly backward to draw the coracoid process from off the humerus, when the arm is extended by the assistant, the Surgeon should bend it toward the body, which will in most cases be sufficient, to complete the reduction a bandage must then be passed round to secure it.

The Wrist is sometimes luxated, this takes place forward and backward, It can be easily reduced, by making the necessary extension, and pressing the bones at the same time into their proper place. Of the fingers. Luxation of the fingers occur forward and backward extension & bending the fingers, will in common readily reduce them. Luxations of the Thumb. When the thumb is luxated at the second phalanx, it is the most difficult of reduction of any bone in the body. Extension has been applied so as to tear off the first phalanx & yet the bone not reduced. Of the Humerus. This was though by some to occur often on account of the amazing strenght of its capular ligament, where strength they computed sufficient to bear 1000 lb & from this concluded that luxation could not often happen. I have however seen more luxations of the

4th of Cases, down of the back of downward of directly backwards

2 shortened, has pain in the and he cant turn the outwards - the distance between the crista gallis of the trocanter major is diminished

+and backwards of upward

It can be luxated in 4 different directions

1st upward and backward
2d downward and forward
3 backward and downward
4 directly backwards - - -

When its is luxated upward and backward, the patient cant turn his toes outward and the distance between the Crista gallis and trocanter major is diminished - - - - - - - - -

thigh at the hip, than I ever saw fractures of the neck, it is generally luxated, so that the head of the bone, passes upward & backward lodging on the dorsum Ilii and rest, to this downward & forward into the foramen Ovale and may be luxated directly backward, when it is luxated, backwards and upwards, the limb is about an inch and ½ shorter than usual. If a bruise has taken place above the pelvis it may influence the length of the limb, by causing the pelvis to be drawn to one side. In order to ascertain if the pelvis be straight, place a string or strip from the one anterior superior spinous process to the other, if it cut the body at right angles, the pelvis is straight, then measure from the anterior processes to the knee, to ascertain the length of the limb. It is necessary to know if the pelvis be straight before we can ascertain the existence of the luxation. If the joint be burned, the injured limb will be longer. When it is luxated upwards and backwards, the toes turn in inward, and turning them outward causes great pain, the patient cannot move the limb. this is when all other symptoms are wanting is enough, to ascertain the existence of a luxation, upward & backward, It is no way difficult in ordinary cases to distinguish, between luxations, and fractures of the neck of the thigh bone, as this I spoke when treating of fractures, when the Bone is luxated no crepitus can be felt, and when the neck of the Bone is fractured, the foot always turns outward and is easily turned inward. But if it be luxated upward

Sahara and afraid

foot and the culture

and backward, the foot cannot be turned ~~upward~~ out at all without causing great pain, when it is luxated downward & forward, it is lengthened, mostly about an Inch, and the foot is turned outward, and turning it inward, causes great pain, the distance, between the trochanter major, and the superior Anterior Spinous process is greater when the head of the bone is luxated forward & upward on the os pubis it is a little shorter, this is a very rare occurrence only one case is mentioned by only by Desault, in which case the foot turned outward, the same kind of treatment is required nearly in all cases, i.e. extension and counter extension. As the Brim of the acetabulum is large, an apparatus to dislodge the head of the Bone, and pull it out making extension and counter extension at right angles, with the Body is required. On these general principals, luxations of the head of the thigh are to be treated. In luxations of the head of the thigh bone, it is necessary to use a considerable degree of force for its reduction. and the best method is pullies when they can be had. but it can be readily effected by the assistance of men and and one advantage is, that they can desist instantly when required, but in obstinate cases where much force is required, the pullies are commonly used. I shall next give you the method of treatment. When it is luxated upwards and backward the patient is to be laid on his sound side, and the limb bended at the hip & knee to relax the muscles. A strap for the purpose of making the counter extension, is to be passed

under the perineum, between the scrotum and injured limb having some soft, substance placed between that and the perineum and fastened to a fixed point, next two strong towels on each side of the thigh, secured by a roller, just above, the knee, to make the extension. When this cannot be fixed above in fat persons, it may be just below the knee, but it is best to secure the extending power to the injured bone, a pulley fixed to the towels can make extension, with great force, during the extension the Surgeon must rotate the limb, to detach the head of the bone. If this is found insufficient, of adlequium. When the head is located into the foramen ovale, or forward on the pubis, make the usual extension and counterextension, in a line with the limb, and at the same time make the usual extension and counterextension, at right angles with the thigh bone which is absolutely necessary. to effect this the patient, lying on a table pass a strong towel round between the thighs close to the perineum, An assistant is then to get on the table, and take the towel over his shoulders, and pull upwards to make the extension while the knee is placed on the crista of the Ilium, to make the counter extension, meanwhile the Surgeon rotates the limb, If this is found ineffectual for drawing the head of the bone out of its situation fix a pulley to the towel, and pass a strong towel round the crista, and fasten it to the staple, for making the counterextension. When the head of the Bone is on the

"and you can feel the internal condyle of the
Humerus

a great deformity and you
can feel the internal condyle
of the Humerus. You can feel

Pelvis, the Surgeon should rotate it, and bend the leg at the knee, by placing one hand on the knee and grasping, with the other below it while the extension is making. Desault thought the contraction of the capsular ligament prevented reduction, but I believe the almost only cause of resistance in reducing luxations is the contraction of the muscles, for the same orifice which suffered the head bone to escape would also be large enough to let it return. If the bone is not reduced, it will cause a new socket to form for itself. A proof that the head of the femur will form a socket out of the acetabulum is instanced by the case of a Girl "who fell and hurt her hip, so that she kept her bed several weeks, when the swelling wh. had supervened had subsided the hip was found to be luxated. Sometime after she began to go about she fell, and hurt her other hip, when she had got over this fall, she found that her legs were contrary to what they had been nearly of a length. After she had acquired more strength, she was able to walk on crutches, and gained strength in her hips every day, but she was taken sick and died, the hips were dissected, and found both luxated, a new acetabulum being formed, wh. no doubt had she lived, would have done very well.

Luxations of the Knee joint this occurs very rarely, I never saw but two cases and in both of these, the tibia was received on the external condyle", this is easily reduced, though not so easily kept in its situation. When luxated, the leg is much distorted, Desault's long splint, answers very well, for keep

while extension and counterextension are going on a roller should be applied from the foot to the pelvis, to prevent inflammation, and the foot a little elevated, if inflammation set the dressings with sugar of Lead and vinegar tho' some surgeons prefer oil & vinegar

Luxations of the Petella it can be luxated outward and inward. It is generally luxated outwards, the patient feels pain, and cannot bend his leg, the knee is deformed, the pulley of the condyle of the femur is felt thro' the skin and the petella forms a tumour before the external condyle, instead of the faces of the petella being anteriorly and posteriorly, the anterior is become the external, and the posterior the internal the symptoms of the luxation inwards are nearly the same, the tumour form'd is placed internally, treatment extension and counterextension the noise the bones make in going into the proper places and the patient can bend his leg and it is then no way deformed, the knee is to be moved gently to prevent stiffness —

ing the Bones in their proper situation. after they are reduced, the patient should keep his limb in perfect quietude for 6 or 8 weeks, untill the ruptured ligaments have perfectly united. the patient must be kept in bed." I once saw an luxation of the Ankle, tho' they rarely occur "A Lady with high heel shoes coming down stairs, and stepped too far so that the heel of her shoes only rested on the Step, the weight of her body bending her back, pushed the tibia forward off the Astragulus, on the instep, in consequence of which, the toes were kept extended, the Maleolus was likewise broken, I was not called in till swelling and inflammation had taken place, and I could not exactly ascertain what was the matter, she was bled & at the end of 3 days, when the swelling had subsided, I was able to ascertain the nature of it. It was reduced by an assistant holding down the tibia, while I caught hold of the heel & toes and pulled the foot forward, a Splint was applied to the fractured Maleolus. For the treatment of Sprains refer you to Lazer, the joint should be immersed in cold water for some time, or water poured over it, after which cloths wet with Vinegar, should be applied and continued for several days and it should be kept at rest, for if the patient move about he is sure to bring on Inflammation which upon resting will subside and return again upon motion. If used too soon and if the patient continue to use it, Suppuration & hectic may be the consequence, wh. In one case of a Lady actually occurred, Caries of the end of the Bone take place, And Am-

The foot can be luxated inwards or outwards, forwards and backwards, they are most common inwards and outwards, the luxation inwards is occasioned by a violent abduction, it is easily known by a derangement of the part the sole is turned outwards and the back inwards inability to move the foot, and an eminence form'd below the malleous by the astragulus -
outwards, the sole is turned inwards and the back outwards, and the astragulus forms an eminence below the external malleous and the foot cant be moved. Treatment, one assistant makes counterextension ~~which~~ and another draws the foot, whilst, the Surgeon, pushes the latter part in a direction contrary to that in which it was luxated, if the luxation be inwards the external edge of the foot must be depressed by elevating the internal the articulation is to be covered with compresses and moistened with Brandy. and splints which reach below the sole of the foot, are to be applied on the inside & outside of the ~~foot~~ leg. - sometimes the Astragulus is entirely removed then the bones of the leg rest on the os Calcis, the bones thify the leg is shorter. this is when it is compound fracture an luxation amputation is not necessary -

putation is necessary for the recovery of the patient. Lecture 18th.

Of Injuries of the Head. Injuries of the head may be divided into internal and external external as they affect the scalp and integuments and internal as they affect the Brain and its membranes. they are of several kinds as 1st Contusion, 2d Punctures 3d Inflammation of the Brain and its membranes and 4th Concussions I shall begin with the scalp, the injuries done to the scalp are several, and first of Contusions. When contusions of the scalp occur in which there is a rupture of the vessels, they pour out their fluids, forming a tumor and swelling which has a flappy feel around this tumor are hard edges and it imparts a sensation to the finger as if the Bone was broken, which often misleads the inexperienced who are not aware of it. 2d Punctured wounds of the scalp, the patient is often affected with great pain inducing them to make incisions thro' the scalp, when to their surprize they find the Bone in a sound state, and this produces a disagreable suppurating sore and perhaps an exfoliation of the Bone. the Best treatment is rally wet with Vinegar & applied to the affected part. In a few days the extravasated blood, will be absorbed. If the Inflammation extend to the pericranium, it becomes necessary to dilate, the wound. If the Inflammation affect the pericranium the patient becomes feverish, I have seen Inflammation of it, occur in every kind of wounds

rapt in lacerated wounds, It has been supposed that it occasioned inflammation of the Brain, and therefore the panning has been advised but I believe, it does not occur when the injury is only on the outside, for it is hardly probably, that two sides of a cavity, will become so violently inflammed at the same time, for instance in violent inflammation of the bilious coat of the stomach the peritoneal coat is hardly ever inflammed, and vice versa in peritoneal inflammation, the external part are seldom affected Besides these affections, there is another effect of the injuries of the scalp, which is a severe fixed pain in the part injured, it takes place, from the time of the accident. I have seen contusions of the scalp, which occasioned great pain in the part, and continued a long time, the first case I ever saw was that of a Lady, who had received an injury of the scalp, upon the parietal bone, which gave her great pain, the inflammation subsided in a few days, but the pain continued she had used emollients without any effect, Upon examining the case I thought the bone was fractured, but upon further examination, It was found to be only bruised. I proposed an incision, which was made thro' the scalp, the pain immediately ceased and never afterwards returned Some cases of this kind have resisted every treatment, and subsided by only retiring to the country, and remaining there some time, another instance of a young man who had received an injury of the scalp, upon the

parietal bone on one side, and at the same time received a blow upon the other, great pain followed it, which still increased and by the 2d day, the pain was become so great, that his friends had to hold his head, from preventing the ordinary sounds of the house made by walking across the floor, exciting convulsions, Evacuating medicines were used but to no effect, the incision was made, thro' the scalp, in the contusion wound, by which, he was much relieved, but the pain returning, in ½ an hour on the other side, the bruise on the other side, was laid open in the same manner and the pain ceased and never returned again. Of the Brain & its membranes.
and 1st of Compression. When injuries of the head occasion compression of the Brain. Coma sickness at the stomach. Vomiting involuntary discharge of urine & fæces. the pulse is full hard & tense all these symptoms take place. the causes which produce these are of two kinds. 1st Contusions of the Skull and 2d Compression, from the effusion of Blood, and other fluid collected inside of the Cranium, either between the membranes and skull, in the substance of the brain itself or in the ventricles, and this may happen without a fracture of the Cranium, or with it. Fracture of the Cranium occur without these symptoms, even when the bone is indented. I have seen slight depressions of the Cranium, without the usual symptoms of compressed brain. An Instance of this kind was in a fracture

of the forehead, so that the little finger might lay on the indentation and yet no symptom of Injury of the Brain existed. But in all the cases of this kind, which I have seen, the Injury was received just above the frontal sinuses. When no symptoms of compressed brain appear the scalp, should not be divided, but when symptoms of compression occur, make an Incision thro' the scalp, so that you may examine the bone, if the incision be not sufficient already, & relieve the compression with the Trephine. It has been customary to seperate a portion of the scalp, I myself once cut off about 1/4 of it myself. But this is cruel, since it is of no use. A simple incision or a crucial one of the scalp, is always sufficient to examine the state of the part. Bone; If a fracture be found to exist, it is safest to make a perforation, thro' the Bone to relieve the Dura Mater. In compression of the brain resulting from effusion, from the vessels, the symptoms of compression do not always occur immediately, because the effusion does not accumulate soon enough to produce it immediately "I was once called to visit a Boy who had received a blow on the forehead, from a stone thrown across the street, the bone was fractured and a little depressed, the pain was not so great at first, but he went home & gave a history of the accident, in a few moment he fell from his chair, supposed to be dead, his pulse full & his extremeties cold. The operation of the pawning was performed, & blood evacuated from, beneath the skull, which had occasioned

and frequent

"and frequent."

the compression and he was immediately relieved. 3d The next Injuries that I shall mention, are such as produce Inflammation of the Brain or its membranes, the Inflammation does not come on for some time after the accident. Symptoms. The patient cannot sleep. Constant watchfulness, pulse hard & tense, the face becomes turgid, a sense of tightness, as if cords were tyed round the Brain, thirst, suffusion of the eyes, delirium, nausea & vomiting, if these symptoms continue for some days without any abatement, or increase, and if they are occasioned by contusion of the scalp, a free incision should be made down to the ~~scalp~~ Bone, to examine the state of the parts, if the Inflammation within the skull has proceeded on to suppuration, the pericranium will be found spontaneously seperated from the skull, and discharges very commonly a portion of thin ichorous matter, the bone will have an unhealthy appearance, generally of a whitish milky appearance or color, but sometimes of a purple tinge, under such circumstances, the Trephine should be immediately used. Inflammation of the brain may occur from simple contusion of the scalp, or from concussions of the brain, For contusions of the scalp apply a bread & milk poultice, and if an Abscess, underneath, treat, as in any place, In all cases low diet, should be strictly adhered to, to prevent Inflammation, of the brain, or its membranes purges should be used & copious V.S. Blisters should be applied over the head, and kept running.

Inflammation of the dura mater, where we have reason to believe there is a formation of matter on its surface between it & the skull an opening should be made, thro' the bone for its discharge. sometimes both the dura Mater, and pia mater, are injured, when the last a perforation of the skull will be of no use, as the matter collected, between it and the dura mater cannot be ~~collected~~ evacuated. when there is reason to suppose, that inflammation of the dura Mater & pia mater, has taken place, from contused wounds, the patient should be trephined, at the place of injury, which by removing the tension of inflammation membrane, may prevent suppuration and a train of disagreable symptoms, when the degree of violence has been sufficient to fracture the skull, we sometimes find the edges of the fracture close. A question has then arisen whether the patient should be immediately trepanned or not, Mr. Pott, who took great pains to inform himself of the nature of injuries of the head, is of opinion, that it had better be done immediately, and it is certainly safest, because there is a great risque of inflammation and suppuration taking place, the reason why it should be done is that, that the fracture is compound, or else it could not be ascertained, that the edges of the fracture were in contact, this is necessary, but I have seen where the inflammation, was not great, suppuration of the dura mater avoided, by the antiphlogistic regimen. In simple fractures

of the cranium, where the brain is not compressed, the trephine should not be applied immediately. 4th of Concussions this sometimes produces the symptoms of compression

It may occur from people jumping from a height on a floor, from falls, or from violence applied to the head. In wounds of the scalp where the patient becomes immediately senseless or delirious, beginning a sentence and breaking of in the middle suddenly. it has been supposed that the brain has been shaken. I doubt however whether some of the vessels within the cranium are not ruptured upon examination. I have in some cases, where the brain was supposed to be contused, found the vessels ruptured, and in others not so. In these cases no benefit is derived from trepanning, general remedies should be used, the antiphogistic plan is to be had recourse to and all stimulating applications carefully avoided, by low diet, and blisters should be used, and if these fail blisters, Mercury in a sufficient quantity to excite a salivation. as a general remedy. I believe it would be right to pour cold water on the head in every instance, for sometimes by that means the effusion, from the vessels, will be in a great measure prevented. I would advise for your perusal Pott on the Injuries of the head. I have now only to show you the way of operating with the trephine. In the first place, have the head shaved, by which we will be enabled to examine the injury of the scalp. in the next place, make an incision thro' the scalp. for which purpose a scalpel

The Instruments necessary for the Operation of Trepanning —

1st. a scalpel, the handle of which is capped with Iron to scrape off the pericranium —

2d. a trepanne the centre pin of which is movable

3d. a common tooth Pick to examine the perforation

4th. an Elevator

the handle of which is capped with Iron, in order to clean the bone will be found, the fittest. In laying bare the skull to take notice whether it be fractured, or wether a groove made by some ves-sel appear, if it be the latter the edge will be smooth, if the former they will be sharp. If the bone be depressed it must be elevated. To do this it is necessary to remove a portion of the sound part too, the centre point of the trephine, should be placed, on a sound part, or else it will tend to depress it more. during the perforation is making, great care should be taken to move the Centre as you still penetrate deeper, so that it does not perforate the Dura Mater. It is likewise to be care fully observed, whilst operating over the lateral sinuses, when you suppose that you are nearly thro' the bone, the key should be well cleaned out to examine, if it is nearly thro' equally all round, for this purpose, a common tooth pick, An-swers very well, you may have likewise recourse to your ~~trepan~~ elevator, this should be done often, towards the last and they if you can raise the unclosed pieces, If you find it nearly thro, on one side lean the trephine to the other. It is advis-able, to force the piece out with the elevator before it is quite cut thro' as there, will be then less danger in injur-ing the Dura Mater, and if any splinter of remaining bone may be broken off, with the elevator, A saw of this shape ⊥, may be used after the, trephine, when long depressions of bone require it. because to use the trephine

" In expiration it rises up and in Inspiration it is depressed, in expiration, the Vena Cava is pressed upon by the Abdominal Viscera pressing against the diaphram, and the Aorta is likewise compressed which causes the rising in the brain. Now there is a difference between this & the Pulsations of the Brain --

in several places adjoining, wou'd remove too much of the sound part of the skull. When symptoms of extravasation, within the cranium occur from external injury applied to the head, a perforation shou'd be made thro' the skull to let out the effusion. when blood is collected, between the dura mater and skull, a hole made in this manner, will suffer it to pass out at times, this effusion is but small, at other times it is of so great an extent, so that the dura Mater lying close to the perforation, prevent its escape, a spatule, introduced between the dura mater & skull, will suffer the matter to flow out. sometimes, an effusion is collected, between the Dura mater & brain, and upon removal of the bone, instead of a flat surface, a convex one is presented, sometimes rising up so much as to fill the opening of the bone," but no motion of the brain, will be perceived, there are not symptoms of effusion, between the lobes of the Brain, because if it was an extravasation between the lobes of the brain, the motion of the brain will be perceived. I have never seen the Dura Mater punctured in any case that the patient got well, therefore, when it can be avoided it shou'd not be done. I have cured, an effusion in the brain, where by observing, the Anti phlogistic regimen, and by as often as three or four times a day for 6 days the patient got well, which I believe would not have happened, had the dura mater been punctured. When the Dura Mater is punctured, there issues a fungus portion from the wound. Suppuration takes

" Because it is apt to adhere to the dura mater
of and blistering

" that is if we ~~not~~ are certain that pus or any
extraneous substances are to be discharged
if this be the case, put but spread with
some simple ointment between the scalp and
Bone, so that as soon as granulations begin
to shoot out, that we may let the scalp
unite - - - - - - - - - - - - - -

place at its root and the patient dies. After the operation of trepanning is gone thro' bring the edges of the scalp into contact, and then apply a simple bread & milk poultice, which is the easiest application, "it is not a good application," nor should any greasy application, be applied, as it will prevent the matter from flowing out. the poultice should be continued, till granulations appear, and then dressings with simple cerate, the application of the trepine in this case only relieves the compression of the Brain. this done we must guard against Inflammation. by ℞. cathartics. low diet &c. the antiphlogistic plan should be pursued whilst any degree of Coma continues, and in depressions of the Bone, where the brain is completely relieved, by its elevation, the edges of the divided scalp, may be drawn, together, to unite by the first intention" as it would take a much longer time to heal if it be suffered to suppurate and granulations

Lecture 19th

Of diseases of the Eyes. First of their Inflammation this may take place in their eyes lids, either in the whole or in a part, in the tunica Conjunctiva, in the Cornea, or in the globe of the eye, either in the anterior or posterior chamber Inflammation of the eye lids, sometimes causes, an extravasation of serum, into the cellular ~~membrane~~ texture, of the eye lid. Swelling the part very much, so that the patient cannot open them the skin, becomes, of a scarlet colour, this frequently comes on in the night, the patient supposing it to arise from the bite of an insect, it is not however easy to ascertain

Dr. Pyrich recommends. Tar Water in the strongest terms, to be dropt into the eye

+ tar ointment

what is the cause, unless when it arises from mechanical violence — Treatment. In general if there be much inflammation V.S should be used which with the exhibition of a mercurial purge and low diet, will mostly remove it. If this is not sufficient, the application of camphor & brandy may be tried, the best way of applying these remedies are to dip rags in brandy and wring them out & lay them on the eyes, the discharge of fluid in most cases of inflammation of the eye lids is but small. Sometimes the edges of the eye lids become excoriated and discharge a viscid purulent fluid, agglutinating, the eye lids, so that the patient has to wash them in the morning, before he can get them open. The general opinion is, that it is owing to the ulceration of the mouths of the ducts of the glandulæ Moibanii. I however believe it to be owing to ulceration, seated at the roots of the hairs, resembling in this respect tenia capitis. A proof of the correctness of this opinion is that they have been drawn out and the patient has got well. Treatment. Sperm Ceti has been used with advantage. A wash of a solution of Lapis Infernalis has been advised, taking to wash it off afterwards so that none should get in the eye, the most general remedy is a solution of Sac Sat. or ung citrinum. I have found that the ung efflor applied between the edges of the lids is the best remedy. when this fails drawing of the hairs has proved effectual. "A girl about 10 years old was cured by this ointment in about two weeks, she had been

× this Unguis is to be cured by dipping of the membrane — ——

" a young man had a violent Inflammation by washing his eyes with his <u>Urine</u>

afflicted with Inflammation & Ulceration of the eye lids for 9 years of the tunica Conjunctiva. When the tunica Conjunctiva is inflammed it becomes red owing to the increased size and action of the vessels which were pervious but now admit of red blood, the eyes water exceedingly the patient cannot bear the action of the light, the pain is of a burning kind, causing a sensation of extraneous matter. In some instances, the pain is not confined to the eyes but affects the forehead. Sometimes the Inflammation consist in a pimple on the tunica Adnata or cornea, but it is most commonly situated near the edge of the Cornea, the only difference between them is in seeing, as the latter intercepts the light Inflammation of the tunica Conjunctiva, often spreads over the whole Cornea, throwing out a coagulable lymph and if not soon cured, leaves a film behind it, obstructing the sight of the patient, and the pimple just mentioned if not soon cured leaves an opaque speck behind it, and the Inflammation of the corners of the eyes, causes an extravasation of coagulable lymph, which occasions the disease called Unguis.* The Injuries done to the eye which occasion Inflammation are 1st Mechanical violence by wound or by sand getting into the eye. Fumigations & 2d acrid substances applied to the eyes these often occasion blindness, as lime Ashes smoke &c. 3d strong light 4th to much exercise of the eyes

Dr. Wistar when lecturing relative the case of a Lady, she had the venereal disease the Dr. gave her a strong injection and in 24 hours afterward a most violent inflammation of the eyes broke out, as soon a the discharge came on again from the Virgina the eyes got well the Dr. prevailed on her to take a strong injection, which produced the same effect - — ——

in viewing small objects 5th Cold. 6th Intoxication 7th Small pox 8th venereal disease." Inflammation often occurs without our being able to assign any reason for it. Inflammation of the eyes is sometimes produced by matter of gonorrhea being applied to them, this is of rare occurrence, but when it proceeds from this cause it is rare but it is uncommonly bad. Next of Inflammation of the Globe of the Eye. This may occur either before the christaline lens, or in the posterior chamber, behind the lens. it is attended with great sensibility, pain & fever. When it affects the Anterior chamber only, there is not so much pain when it occurs in the posterior chamber of the eye it occasions violent pain, the fever runs high, and in general if it is not soon cured, the sight is lost. the first case I had ever of this kind the patient soon died. Treatment. First remove all Mechanical violence, and avoid all the remote causes. If it be produced by some extraneous matter, getting into the eye as a speck of sand, lodging between the lid and the Globe of the eye, it must be wiped off a probe, with a soft rag wrapped round it, and pressed between the lid and the eye will generally disengage it, if this should be unsuccessful, water injected in the eye. If it still remains by inverting the lid we are able to examine it & remove the sand. If the sand sticks in the corner, it will not be easy to see it, as the eye will roll about incessantly and cannot be held still by the patient. A Speculum or

or the handle of a pair of scissors, will enable us to hold the eye still, so that we can examine it, and remove the offending object with the point of a lancet. Entropion. The Inflammation of the eye occurs from the hairs of the eye lid growing inward. when this is the case pulling the hair out will produce a cure. But there is another affection of the eye lids. the tarsus itself turns sometimes in the eye, it may be turned out and divided, or a piece of the skin of the lid may be cut off taking care, not to divide the conjunctiva, and the divided edges brought into contact and kept so by the divided interrupted suture. We can generally cure Inflammation by bleeding which should be regulated by the violence of the fever, and the degree of Inflammation, when the patient has lost a considerable quantity of blood from the arm he can bear cupping and leeches. If the Inflammation still continue, there is then another mode which is very beneficial, ~~scarifi~~ scarification of the vessels of the adnata, the next is purges & the antimonials have been found very beneficial. Lastly applications to the eyes, the mildest remedies should be tryed first, of which perhaps the pith of sassafras is best. Sometimes a bread & milk poultice answers very well; but it is frequently to heavy. a crump of stale bread put into a gauze bag and boiled, and dipt in into rose water and applied to the edge, is a very pleasant application; if this does not answer very well.

Land or sac sat, but Abb & Land combined in the usual proportions may be tried, but astringents should not be employed too soon, they do damage if used before proper evacuations have been used. In which cases ℥ii of vinegar added greatly improves the remedy. When the Inflammation has gone on to suppuration, and the matter is collected under the cornea, it should be immediately removed by an incision made in the same manner as for Cataract instead of letting it open by the natural process, wh would render the cornea opaque. When these remedies fail. Mercury used to excite a ptyalism, with vegitable diet often proves useful, two other circumstances are of the highest importance. 1st Confining the patient to a dark room & 2d diet perfectly vegitable. A seton in the neck may answer to decrease the Inflammation.

UNGUIS. Sometimes grows so far over the cornea as to prevent the sight entirly the only remedy, is to dissect of the membrane, with the scissors, except that part wh adheres to the Cornea, ~~wh almost always remains~~, wh should be very carefully dissected off with a very sharp knife. I have already mentioned, that Inflammation, sometimes occasions an opacity of the Cornea, wh almost always remains, but which sometimes goes off voluntarially if left to itself. Mistaken notions of the cause and nature of this disease have led Physicians into a very erroneous Practice. Molasses and powdered glass, have been used with a view

to wear it off, but this only serves to make it worse, if any part of the Cornea remain transparent, an operation may possible restore vision again, by making an artificial pupil or opening. I once saw a case where a patient had washed his eyes with his urine whilst labouring under Gonorrhea, Inflammation suppuration and all the Cornea became opaque, the patient applied to me to restore his sight. I consented to operate on his eyes, tho' with little hope of success. I passed a knife thro' the Cornea and cut off a piece of the Iris the the eye was then closed and he was put to bed. He can now see to read if the print be large. I never saw such an operation before. When the eyes are violently Inflammed it is very difficult to remove the Inflammation. I once had a case of violent Inflammation of the eyes. the patient laboured under great pain, in which low diet & purging Salivation &c. had been used without success, cupping and scarifications were likewise useless he was cured by tar water alone, by washing his eyes with it, and wetting rags in it and laying over the Eye —

Of Fistula Lachrymalis

It is impossible to cure this without an accurate knowledge of Anatomy of the parts. The tear secreted by the Lacrymal Glands, which are used to lubricate the eyes. are taken up by the punctual lacrymalia, and carried to the lacrymal sac, from whence they are conveyed to the nose at the Lower part, just under the Inferior turbinated

Bone, by means of the duct and Nasane. These two ducts wh. lead into the nose are liable to structures, when they are stopped by any means they become swelled between the obstruction and the Eye, tears form in the eyes and the smooth surface of the sac is protruded. If you press on the swelling, the tears will regurgitate & if the pressure be continued, the tears will be followed by a viscid matter, resembling mucus, which is probably secreted by the inner surface of the sac, If the eyelids stick together, they may be washed, and a piece of soft dressing applied between them, not unfrequently Inflammation takes place, in the Lacrymal sac, occasioned by the distention of tears or by the person taking cold, and is communicated, to the Skin lying over the sac, and swells so that the patient is unable to shut his eyes. The Inflammation is generally attended with fever. & and low diet are necessary for the cure. When the sac is distended so as to burst into the eye, or opens by Ulceration, it is then called fistula Lacrymalis. In fistula Lacrymalis occurring from a ~~tumor~~ structure in the Lacrymal duct, no inconvenience is experienced by the patient, but that only arising from the tumor, which may easily be removed by placing the finger upon the external Canthus of the Eye, the will flow down the cheek. An accumulation of tears in the Lacrymal sac, occasions the Inflammation to terminate in Suppuration. **Cure.** If the duct

The Instruments necessary for the operation of Fistula Lacrimalis —

1st a piece of horn to pass up the nose —
2d a probe —
3d a piece of wire —

can be opened by a probe passed from the sac, below the stricture so as to let the tears flow into the nose. after the probe is withdrawn a piece of bougie long enough to reach from the outside of the eye into the nose should be introduced, and kept in to prevent the stricture from stopping the passage again. the bougie should be long enough, to project about one ½ of an inch, wh should be bent down over the cheek. When the tear cannot be opened by this means, we must make an artificial opening thro' the Os Unguis into the nose for the discharge of the tears. It sometimes happens that the fractured edge of the bone made by puncturing the Unguis, throw out a bony matter, and close the opening again. the swelling of the sac shows where to make the opening. I shall now show you the method of operating. When we make the incision thro' the Integument to introduce the punch, the Back of the knife should be upward to prevent cutting the tendon of the Orbicularis muscle, the incision being made a piece of horn is to be passed up the nose, to make the necessary resistance against the puncturing Instrument. wh is a hollow punch invented by Mr Hunter. It is to be introduced into the sac, till it comes into contact with the Os Unguis, thro' which the opening is to be made, in this manner the use of a bougie is unnecessary. It is sometimes attended with a caries & fungus of the Bone the carious portion of the bone should be extracted. & the

Lungs treated the same as in any other part of the Body. Bring the edges of the wound into contact and secure them ~~into~~ with adhesive plaster, and the tears will flow thro' their newly made orifice, without difficulty. — Lecture 20th Of Cataract. —

By this term is meant an opacity of the chrystaline lens or its capsule, which prevent the admission of Light to the Retina It shews itself by a speck behind the pupil, and is most common-ly grey sometimes Black & I have seen it of an amber colour It commences by dimness of vision, compared by patients to their looking thro' gauze, sometimes before any opacity is discernable by looking into the eyes. there is by the patient an appearance as if maotes, threads or hairs were floating in the air before them this disease seldom occurs in very young people most commonly at about 40, But I have it in an Infant. It often comes on without any external violence. I have seen one case follow a blow Another Rickiasis. Along list of Medicines have proposed or employed, for the Cure of Cataract, & Mercury may be placed at the head of them, without any good effect. this has been assisted by Bl. Cupping purges blisters leeches electricity &c. but found to be of no use If it arises from Mechanical vio-lence, it may disperse, indeed nature unassisted by art possesses the power of removing the opacity. I think this takes place when the capsule of the Lens are opaque the often-est, & oftener in Women than in Men, I have seen the ca-ses of two Young Ladies, in whom this absorption occurred

" when the Lens is depressed they then are sometimes absorbed. Dr. Physick says that he has lately performed the operation of Couching, and it succeeded very well, but the other two not so well

the could see by the aid of a convex lens, wh. makes me believe, that the lens was removed. I have seen another brought on by an unsuccessful attempt to couch. As medicines are unsuccessful in the cure of this disease, it is a happy circumstance, that it may be relieved by Surgery. Two operations have been proposed viz 1st Couching & 2d Extraction. Couching is performed with a needle, this is passed thro' the Sclerotica Coat, about one tenth of an Inch, from its junction with the Cornea and passed on till it get to the Chrystaline lens its centre, the needle is then turned with its flat part against the Lens, which is depressed below the vitreous humour, if it should rise the operation should be used or repeated. "

Extraction Consist in making a semi section of the Cornea thro' which the Lens is to be removed from the Eye — Both operations have been practised that of couching is the most ancient, that of extraction the best. Because 1st the Operation is not so painful, this is proven by comparative operations, the same patient has had lens depressed in one eye and in the other extracted. 2d When the Cataract is taken out, it can never again obscure vision, but it may rise repeatedly when depressed occasioning a return of Blindness and each time the operation must be repeated. It sometime hangs loose in the posterior Chamber of the Eye, and when the Patient stoops causes blindness, by its falling upon & closing the pupil. It has been agreed that the lens have been

" an other principal objection to Couching
Sir says that he has seen the Vitreous humor
fill up the whole anterior Chamber of the Eye
in a few minutes after extraction and even wet
the linen that was over the Eye, Now in Couching
there is not a sufficient opening to let out
this fluid but in extraction there is — —

been absorbed, but this is seldom the case. 3d When the cataract is fluid it is impossible to depress. I have know it to be of the consistence of calves foot jelly, one of the white of an egg not completely coagulated 4th When the Capsule is opaque, as well as the itself it may be pulled out; but such opaque capsule cannot be depressed with the couching needle, and after the operation returns to it place by its elasticity. When adhesions exist between the capsule of the lens and Iris: by opening the Cornea in extraction they may be torn but not in depression without injuring the Iris. In one instance I have the Iris torn off itself. The inconveniences attributed to extraction are 1st an opacity of the Cornea arising from Cicatrix But none exists when it is divided by a sharp knife with one stroke. If Scissors are employed there is sometimes an opacity, but this is not before the pupil, and of course will not impede vision 2d the passage of the lens thro' the pupil is said to stretch the Iris so unequally as to form an irregular pupil: this sometimes does take place. But it does not impede vision. Besides it sometimes occurs in depression, the patient sees afterwards as well as before. 3d The hazard of Cutting the Iris in passing the knife thro' the Cornea unless the operator is very careful in passing the knife straight a cross the eye, the aqueous humor will escape thro' the section of the Cornea and the Iris will fold itself upon the edge of the knife, and part of it will be cut away. But this may be avoided, by rubbing the

Anterior eye with the finger will disengage the Iris 4th the great danger that the vitreous humor may escape, but this only arises from in consequence of undue pressure being made the moment the section of the Cornea is finished, pressure at that time is unnecessary and should not be made, As every case of Cataract does not promise equal success it is of consequence to know what circumstances are unfavourable. When it is combined with other diseases, the operation is improper The circumstances favourable to the operation is the eye lids should be free from Oedema, the patient should be free from pain in the head When the Operation has been performed during pain in the head the pain is much Increased, the Surgeon should not be deceived in examining the Eye, this may happen, from opaque spots in the Cornea he may avoid the former by looking into the Eye, Sideways. the pupil will not be seen below the spot. In the latter the patient should be placed with his side to the other window that the rays of Light may fall obliquely upon the eye, the pupil should contract and dilate freely. this contraction & dilitation does not prove the Retina to be sound, and it may be sound and the pupil immoveable. If the patient can distinguish light from darkness the operation may be advised. In cases of immobility of the pupil where the Retina is sound, the Iris probable adheres to the capsule of the lens, I saw a case of a woman who had a Cataract in each eye, the pupil moved freely in Both, I operated and found both lens as hard nearly as a stone, the patient saw with one eye tho the operation was

performed equally well on each, the patient being able to distinguish from darkness is not a certain sign or test. Before advising the operation it will be necessary to inquire whether the patient be subject to Cough or apt to vomit or sneeze. Some old people sneeze violently. If the patient be subject to sneezing, we should choose the time when he is least afflicted with it. I have seen pressure on the upper lip with the finger, when the inclination for sneezing came on suspended it. I knew a case where sneezing ruptured a vessel in the Iris hemorrhage ensued which did not stop till a coagulum of blood was formed, this extended between the divided edges of the Cornea, and prevented their union I was fearful of removing the Coagulum lest hemorrhage should again take place, the eye suppurated and the patient lost his sight. Sneezing might also force the vitreous humor. Persons apt to faint on every occasion are bad subjects, they should take Laud. before the Operation. As Inflammation sometimes occurs to a considerable extent and may go to suppuration, it is proper to confine the patient to a low diet for a few days, and to reduce the Inflammatory diathesis it will be necessary to use Ol purging &c. for 8 or 10 days before the operation, a day or two previous to the Operation a Blister may be applied to the Back of the neck, the bowels should always be opened to prevent the inconvenience of rising for a few days, The best seasons for operating are the spring & Autumn. Cold or hot Weather is not

proper, because in the first the room cannot be kept equally warm which exposes the patient to the risk of taking cold and in the latter he is apt to be restless. The instrument for operating are 1st for making an incision of the Cornea. a knife after the direction of Baron Wenul. it should gradually increase in its width from the point to the handle, it then serves as a wedge to prevent the escape of the Aqueous humor. it should be thin but sufficiently firm, as not to be broken, the upper edge should be blunt till near its point, the rest very sharp the knife should be very sharp, it may be examined by a Microscope, or a much easier method, is to look at it before a looking glass. In choosing a knife we should get it wider at the handle, than the semidiameter of the Cornea 2d a needle a little curved at the point with which, the Capsule of the Chrystaline lens may be torn 3d a little scoop of gold or silver to extract small fragments which are apt to remain behind 4th a small hook, to be passed through the pupil and fixed in the body of the Crystalline lens for its extraction 5th a small pair of forceps for the extraction of small fragments of the torn Capsule which may remain. It was the practice of the ancient Surgeons to use a speculum Occuli. I use no instrument of this kind to steady the eye the great objection to all instruments of this kind is that they occupy one hand of the

Surgeon, the Surgeon Cannot see the Anterior part of the eye besides it gives pain to the patient and may excite inflammation, in proceeding to the operation I find it of use in fixing the eye to assure the patient there is no danger or pain attending it, the patient is seated on a low chair with his side towards the window he should never be placed directly before a window or else the reflection of light from the Cornea will prevent your seeing the Cataract a bandage is applied round the head just above the eyes having 2 depending Compresses attached to it to Cover the eye, that Compress hanging over the afflicted eye is pinned up to the bandage If the hair be long before it should be Cut to prevent its Chance of getting into and irritating the eye the Surgeon is seated on a Chair Considerable higher than that of the patient and taking the knife in the right or left hand according as the right or left eye is to be operated upon he proceeds to make the Section of the Cornea, the patients head should be supported on the breast of an assistant who raises the upper eye lid in doing this the Skin should be folded upon the Superciliary

ridge so as to prevent its closing, the Tarsus should be pressed firmly against the frontal margin of the Socket the Surgeon pulls down the under lid and waits till the eye is steady at the moment he applies the point of the knife to the Cornea at about 1/10th of an inch from the Sclerotica, he only applies the knife does not suddenly puncture for at that time the eye generally recedes from the knife it should be followed and the moment it becomes fixed the puncture should be made the knife is then carried across the eye and brought out at the opposite side making a semicircular incision If while the section is making by the discharge of the aqueous humour the iris comes forward so as to endanger its being wounded the motion of the knife must be stopped and the iris made to recede by gently rubbing the Cornea the incision is then to be completed that the eye might not be the least pressed upon the assistant who raised the upper lid should let it fall as soon as the point of the knife has passed thro' the opposite side of the Cornea In making the incision never draw back the knife for if this be done the knife no longer

acts as a wedge to prevent the escape of the aqueous humour the knife should be wide enough to cut itself out aways equal to the radius of the Cornea but if owing to the motion of the eye or any other Cause the knife should be drawn back it would be adviseable to desist from the operation and defer it until another time, Baron Wentzel advises to puncture the Capsule of the Chrystalline lens during the Section of the Cornea by dipping the point of the Knife into the pupil this might this might be done if the eye was very Study but it is mostly so very unsteady as to render the Barons directions impracticable I prefer tearing the Capsule afterwards with a needle with this the Capsule can be much easier torn and if it should be opaque it Can then be much easier extracted In tearing the Capsule care must be had not to injure the iris this being done the eye must be closed to give it rest and that the pupil may dilate after resting a few minutes the eye is opened by the Surgeon and gradual pressure made on the ball at the same time the divided portion of the Cornea is raised a little with the Scoop If the lens

does not come easily through the pupil the Surgeon takes hold of it with the needle or hook to facilitate the extraction the moment it is out the lid should be closed and remain some time so they are afterward opened & the state of the pupil examined If the capsule be not opaque the patient sees If opaque the pupil remains white. the Surgeon next should proceed to extract the fragments of the Capsule these are afterward brought into the Anterior Chamber of the eye and discharged by gently rubbing the lid over the Cornea but if they remain in the eye the Scoop should be employed, this should not be pushed too far for fear of injuring the Capsule of the vitreous Humour If the Capsule of the lens is taken out a small forceps is the best instrument. Sometimes the lens cannot be extracted by any mode of pressure tho' aided by the hook It is then probable the Capsule adheres to the iris. the adhesions must be torn away the needle but this requires nicety take care not to throw the iris into folds or it may be torn, Sometimes before the Operation, we know

that the capsule is opaque. the known this by of opacity appearing as though detached from the the Lens. In this case after the section of the Cornea, as it is known the capsule must be extracted. I advise the anterior part of the Cornea to be finished up with a pair of forceps by pulling the whole membrane may be easily taken out. the capsul must be extracted first because it can be more easily got at while the lens remain in the eye, the lens when divested of it capsule falls to the bottom of the eye, they may then be extracted with a small hook. A small portion of the vitreous humor always escapes. After the Cataract is extracted, it is customary to exhibit different substances, as watches and the like, to know if the patient has vision or not, but the eye should not be kept open to long. During the operation none of the relations of the patient should be present. "A man that had been blind for five years, was operated on for cataract, his wife stood by during the operation, and was the first person he saw, the poor man burst into a flood of tears, and it was with great difficulty he was prevented litterally crying out his eyes. after the operation is Completed a soft dry rag is to be applied to the eye ~~to the eye~~, the depending piece of circular bandage is to be impinned, and it will turn down over the eye on this a bandage should be applied, and carried around the head, the patient is then to be put to bed, and ordered to lie on his Back, to prevent the humors from escaping, all light should be excluded, from the apartment

the patient should live on a diet of vegitables. In taking drink he must raise his head to a tea pot without a lid, as the lid might fall upon his eye, this should be used for giving him drink. the patients hands must be tied by pieces of tape to prevent his rubbing his eyes in his sleep. In 8 or 10 days the eye may be examined, If pain or fever come on, Use remedies to remove them, and change the dressings every day as the moisture which escapes from the eye, is absorbed by the dressings, which becoming dry cause irritation, when the dressings are changed, always pull down the under eye lid, for if the hair get into the insertion of the cornea, it will prevent its healing.

Lecture 21st of Hernia.

Hernia may be defined a tumor, occasioned by the protrusion of some of the contents of the Abdomen this takes place at different parts of the body, but most frequently occurs in the groin, owing to the parietes of the body being weaker at that part opposite to the groin, there is an opening for the passage of the Spermatic Cord in Men and for the round ligament in Women thro' which the parts are protruded, either the Omentum or intestines, this protrusion may happen at different parts of the body. When the tumor is formed at the Navel it is called Umbilical hernia. When in the groin Bubonocele and in the thight Femoral Hernia. In every case it is formed, by a protrusion of part of the Omentum or of the Alimentary Canal, In every hernia the protruded parts are inclosed in a sac, which is formed

by the elongation of the peritoneum, there is one species of hernia called Congenital Hernia or hernia Congenita which is well worthy of you attention, here the bowels are in contact with the testicles, the tunica vagnialis which is properly a peritoneal covering covering of the testes passes with it in its decent down into the scrotum, the upper part of the sac generally closes up around the spermatic cord immediately after the decent of the testicle which is most commonly at birth or two or 3 days It sometimes happens that this opening does not close up. by coughing sneezing crying &c hernia is produced, as there are several kinds of hernia I shall principally confine myself to that species called Bubonocele the symptoms are swelling in the groin beginning at the abdominal ring and passing into the scrotum or labii pudenda, the testicle can be felt at the bottom of the scrotum, the tumor is soft bear handling well, and when the patient lies down, it returns, pressure on the abdomen makes it more tight, and if the surgeon lay his hand upon it, and the patient cough he will feel the pressure made against his hand, causing a sensation as if it were blown into, there are some diseases with which hernia is likely to be confounded as Bubo swelled testicle, lumbar Abscess & hydrocele, but by paying attention to circumstances it is easy to distinguish them apart. A Bubo is generally

preceded by chaufhre, it is hard and painful and does not dis-
-appear upon lying down. It is likewise easy to distinguish
between bubonocele and swelled testicle or hydrocele, the
-testicle is hard and painful to the touch, it is only found
at the bottom of the scrotum and, spermatic cord can
be traced to the abdominal ring at which place it is free
from swelling. In hydrocele the tumor begins at the
bottom of the scrotum and works upwards when a hernia
begins to swell at the top, on groin and works downward
the fluctuation may be felt in Hydrocele, and in swelled
testicle or Hydrocele we cannot reduce the tumor by
squeezing it, but Hydrocele is sometimes more difficult
I have seen it inclosed in a cyst, which the patient strained
was protruded, the testis at the bottom of it, hydrocele
is in general diaphanous "A case came under my notice
which was supposed to be hernia, and as such was treated
I was convinced upon examing it, that it was hydrocele
It was diaphanous admitting light to pass thro the tumor
and was cured by tapping, and by injections of Wine.
In the Lumbar Abscess the matter passes from its seat
in the psoas Muscle, down under poupart's ligament
following the course of the Muscle, and forms a tumor
upon the upper and anterior part of the thigh, at
wh place the fluctuation can be felt, and the tumor
can be pushed from the thigh, up into the cavity of

Abdomen, and vice versa, according as the pressure is made on each if your hand be laid on the abdomen and pressure made the tumor on the upper part of the thigh will be rendered more full and tense the great danger that is liable to take place in hernia, is from the great inflammation which arises from the stoppage of the circulation and of the fæces, in consequence of a stricture coming on, the stricture may be formed either at the neck of the sac or by the tendon of the External Oblique muscle, when the existence of a rupture is ascertained it should be reduced, and supported by the application of a truss, not unfrequently the patient can reduce it himself, but when he cannot the Physician by laying him down in a horizontal position, can generally effect, after which a truss should be applied, ~~on the soft part of the pubis~~ directly over the orifice, the truss is sometimes applied on the soft part of the pubis so as to press the spermatic Cord giving great Uneasiness to the patient if Continued any length of time or applied so far to the groin as not to close the rupture the best way is to examine exactly with your finger tracing the tumor into the Abdomen and when you find the Orifice apply the truss so that the soft part should be exactly over it just above the upper edge of the Os pubis. trusses are mostly employed for a particular Age but they should be employed when necessary At all ages Strictures

Sometimes prevent the reduction of the protruded parts but we cannot always reduce them even when there is not any Structure and this for several reasons 1st. Because too large a quan=tity of bowels have Collected in the tumor to allow of being returned 2nd the next difficulty in the reduction of a part is from an al=teration in a part of the Omentum and 3rd from adhesions taking place between the protruded parts and the sides of the Opening or from the adhesions of the protruded parts between themselves when the difficulty of reduc=tion arises from adhesions as in the last case it will admit of no remedy only living supported by a truss when there has been no adhesions I have succeded by Confining the patient to a horizontal position low diet and bleeding. Cathartics &c and then applied a truss when adhesions take place so that the Surgeon is not able to reduce the tum=or as sac made just so as to Contain it should be applied or else the hernia will continue to increase till it gets to an great size. I saw one in which the lower part of the sac reached down to the knee If the patient when in such a situation neglects the truss he is not

Only in great distress but in great danger of Stran=
=gulation the Symtoms of it are increase of hardness
of the tumor obstinate Costiveness pain if the pat=
=ient stand up hard, Contracted tense pulse and
sometimes vomiting and the tumor becomes pain=
=ful to the touch when Called to a Case of Stran=
=gulated hernia it requires immediate Care and atten=
=tion. In proceeding to reduce the protruded parts
the patient should be placed In that situation
which will throw the Contents of the tumor tow=
=ards the abdomen. he should be laid on a firm
bed or matrass with his buttocks raised Considera=
=ble highest and the thigh bent upon the body to
relax the muscles when this is done squeeze the
protruded parts Cautiously with your hand so as
not to injure the bowels when the patient Can do
it It is best because he will be likely to use
less violence so as not to injure any of the parts
this operation is called taxis If this be not
sufficient bleeding very Copiously has been of use
and Mr. Pott Continues it till a deliquium en=
=sues the bleeding tends to prevent any inflam=
=mation I have not however seen any Cases
of bleeding ad deliquium where the reduction
by Taxis succeeded immediately after bleeding

"Great care should be taken in injecting the tobacco glysters, as a person died vomiting tobacco a few minutes after he had taken it. . —

Cathartics are then generally given I have found Cream of Tartar given with about 10 grains of Jalap and a drop of Mint Answer very well along with this the warm bath should be used the patient should be kept in it he becomes very weak and whilst in the Surgeon should try again to reduce it this from producing a general relapation will I have no doubt succeed I have therefore a very favorable opinion of warm bath in Strangulated Hernia when all these remedies fail injections made by a decoction of Tobacco ~~of 3iv to a~~ pint of water may be used this decoction is to be thrown up so as to Create Nausea and general relapation this is the most successful remedy in Strangulated Hernia the fumes of Tobacco are not so Convenient as they require a peculiar Apparatus and sometimes they excite spasms when all these Methods fail the application of Cold as Snow & Ice have proved Useful. Strangulated Hernia has been reduced by Cold this remedy is particularly recommended by Mr. Wilmer I would not hesitate to employ it when Other Remedies fail it should be Continued for some time perhaps for the space of 3 or 4 hours if

necessary If all these remedies fail we must have recourse to an operation for if the patient is not relieved by some means he soon grows wor the sickness becomes more distressing the pain is more intense the belly swells the fever runs high hiccoughs Cold sweats ensue &c: but after a while these symtoms Cease and the patient thinks himself getting better and in some instances the Contents of the tumor go up but soon return worse than before and death quickly Closes the scene from Mortification of the in=testine Coming On It is difficult to tell the exact time to perform the operation because sometimes the bowels Mortify by the pressure in a shorter time and at other times the pat=ient will bear it 4 or 5 days and then get well but in general I would advise if the above remedies fail to perform it in at most 36 hours after its Commencement of the Symtoms of Strang=gulation remain I have once succeeded in red==ucing the tumor after all other remedies fail==ed by raising the foot of the bed highest In this Case the tumor receded in the Course of the night there are two Methods of Operating for hernia and first of Bubonocele.

In proceeding to perform this the first precaution is to shave away the hair then make incision in the direction of pouparts ligament of about 4 inches in length and direct the upper part of it and laying the tendon of the external oblique bare so as to expose the ring thus done puncture the tendon in the direction of the fibres at a small distance about an inch from the ring a director is introduced at the puncture and passed out at the abdominal ring the part of the tendon lying over the director is divided lengthways of its fibres an attempt is now made to reduce the contents by taxis this practice has been disapproved of by some surgeons who say that the contents of the sac may be in such a state as to forbid reduction and that the sac should be opened to examine its contents for say they if any of its parts be killed or the sac contain acrid serum and be returned in this state into the abdomen it will occasion great inflammation But I will ask the surgeons if they would not before the operation use every effect to reduce it and in the present case if it can be reduced it will prevent the necessity of opening the sac by which the risk of peritoneal inflammation

will be Avoided. Opening the Sac would produce a Communication for the Air with the Cavity of the Abdomen And all such Communication are Attended with violent inflammation which Mostly terminates fatally On the 3rd day or Sooner Should the Attempts to reduce the pro=truded parts in the Sac be ineffectual the operation Must be Continued the incision is Continued in the direction of the tumor to the Bottom of the Scrotum and the Sac is laid bare after these Attempts to Scratch thro' the Bare Sac Should be repeatedly made with the point of a Scalpel trying with a probe after each Scratch to see if a puncture be not made when a puncture is made introduce a director and with a blunt pointed bistory enlarge the Orifice so as to introduce the finger which is the best director for a knife After that the Sac is divided thro' its whole extent from its ring next examine the Contents of the Sac which if found must be Carefully returned to the Abdo=men this at times Cannot be done for three reasons 1st Adhesions 2nd a Change in some of the protruded parts or 3rd a Stricture in the neck of the Sac. Alone when this Cannot

be done on Account of a Stricture in the mouth of the Sac the Stricture is then to be divided taking Care not to wound the intestines the finger is then to be introduced as far as possible for a director for the knife. And in general the mouth of the Sac is not so small but that the point of the finger may enter a little way Sometimes adhesions take place so that the intestines Cannot return when the Sac is laid Open these may be easily separated either with the fingers or with the handle of a Scalpel If the protruded parts is altered in shape the ring should be dilated to admit of its return except it be performed by Omentum then the altered part may be Cut off If mortification of the protruded parts take place it should be separated And the Sound part of the intestine joined to the suture And sewed fast to the Sides of the wound Notwithstanding the faces will for some time escape it mostly heals, Altho' in bubonocele it is best not to open the Sac when it Can be avoided yet in Femoral Ruptures I believe it is mostly safest to open the hernial Sac and then divide the

Stricture the Sac here is extremely thin and scarcely to be seen In proceeding with this Operation a good deal of Caution is necessary to prevent wounding the intestines when Cutting near the neck of the Sac Care should be taken not to bear to either side because on the outside of the neck of the hernial Sac passes through the epigastric Artery and on the inside of it the Spermatic Chord Crossing each other directly over the Strictured part. So if you go to Cut towards the inside you will wound the Spermatic Chord and if to the Outside, the Epigastric Artery and if posterior the great blood vessels. to remedy this Mr. Gumbernat has proposed to dilate the Stricture by making the incision towards the pubis his method is after opening the sac to introduce a director or the finger which is better along with the bistory having its edge looking towards the pubis when you come to the Stricture the incision is then to be made towards the pubis dividing the Stricture so as to Cut behind the Spermatic Cord, Dr. Monroe advises to Cut from the neck of the Sac towards the navel so that by keeping that direction you

you may dilate the Stricture towards the an=
=gle formed by the epigastric Artery and Sper=
=metic Cord and there by avoid Cutting either
Mr. Hay supposes that the femoral ligament
forms the Chief Obstruction to the reduction
of the protruded parts I would advise you
to read Pott. ~~Hay~~ & Cooper, Sometimes the
finger Cannot be introduced on Account
of the Female Aperture when this happens in=
=troduce a director under the Stricture and
then with a bistory lay it open Sufficient to
reduce the protruded parts. If the protruded
parts be found in a gangrenous state that
parts must be removed taking Care to Cut
through the Sound part so that the dead por=
=tion may be Completely separated and
the Sound part Stitched to the Sides of the
wound so that the intestines may protrude
About an inch the protruded parts will in
time as the wound heals draw themselves into
the Abdomen and as they are drawn in the
edges will Come nearer in Contact till at last
they will unite and form a perfect Canal
within the Abdomen and the patient will
discharge his faces in the natural way some=
=times the Omentum is found in a State
of Sphacelation it should never be

returned so within the Abdomen or else the dead portion will cause peritoneal inflammation the folds must be spread out to extricate the intestines and the mortified part may be cut off with a pair of scissars If an artery is wounded or divided it must be taken up leaving the thread sufficiently long to reach out of the Abdomen Mr Hay has proposed taking off this portion with a ligature tying it so tight as only to indent the Omentum at first and then daily tightten it till at last it is completely separated and when the gangrenous part of the Omentum is protruded down through the abdominal ring his method is a very good one.

Lecture 22nd Of Hydrocele.

Hydrocele is a term applied to a preternatural collection of water in the scrotum of this disease there are three species the 1st is an effusion of water into the cellular substance of the scrotum the 2nd species is when the water is contained between the tunica vaginalis and testis the 3rd is when it is contained in a cyst or cysts on the spermatic cord or body of the testis the first which is an anasarcous tumor is a symptom of general dropsy and is easy distinguished from the species of Hydrocele

It is often a smooth equal surface and is dif=
=fused equally all over the Scrotum The tumor
has a doughy feel besides indentations may
be made with the pressure of the hand the
skin is nearly of its natural colour and diaph
=anous If the patient lay down no diminu
=tion of bulk takes place in the tumor the
swelling begins at the bottom of the Scrotum the
testicle can be easily felt at the beginning of
the disease and likewise the spermatic cord and
no ~~effect~~ fluctuation can be perceived the 2nd
or that of the Tunica Vaginalis is owing
either to an increased action of the exhalent
vessels or as some say a decreased action of the
absorbents the swelling in this species begins at
the bottom of the Scrotum soft at first but generally
grows more tense and cannot be reduced by
pressure tho' sometimes it collects suddenly
from a lymphatic the rupture of it. the tu=
=mor is small at first in which state the
testis can be easily felt but when the tu=
=mor is large it is not perceptible the fluc=
=tuation can readily be perceived and the
tumor is diaphanous the disease is most
likely to be confounded with it is hernia
it is however easily to be distinguished
from hernia as in the former the tumor
begins at the bottom of the Scrotum and
extend upward in the latter it begins above
and extends downward hydrocele is always

permanent whereas hernia disappears when the patient lies down. Schirrus of the testicles has sometimes been confounded with it we can distinguish between a hydrocele & a Schirrus of the testicle by the latter having a hard swelled Spermatic Cord and in Schirrus the tumor is flatted & heavier than hydrocele. It is scarcely possible to confound it with herniahumoralis this kind of hydrocele is however sometimes very complicated so as to require much attention to distinguish between it and other diseases the third species is when the water is contained in one or more cysts of the Spermetic. here the testicle may be felt at the bottom of the Scrotum the tumor is diaphinous and swells up towards the abdominal ring and in one case I believe the tumor extended thro' the ring itself In such cases there is much difficulty only if we press the tumor so that the water is forced within the abdomen the instant we take away the pressure it will return again having mentioned the different species I shall next proceed to the treatment. No Inconvenience results to the patient from hydrocele except

from the weight and bulk of the tumor tho' in hot weather at times the skin is excoriated and if the patient walks much about causes pain in the back from its weight this is relieved by the use of a sus=pensatory bandage which sits so easy and is worn with so little inconvenience that some patients refuse to submit to the operation the first species which is that of anasarcous hydrocele it is general=ly cured by medical aid and not by an operation the discharge of the fluids are necessary for the cure this I would ad=vise to be done by making a small punc=ture with the point of a lancet thro' the skin so that the water may ooze out this is preferable to making an opening with caustic or the introduction of a seton or making a deep incision which may produce mortification the punc=tures are to be covered with dry lint they should be made in 4 or 5 places sometimes an anasarcous tumor is produced by the bursting of the tunica vaginalis a case came under my care of a gentleman who was sitting still and felt something drop on scrotum shortly after a tumor appeared

which was soft and diffused itself generally over the Scrotum the Skin became black which very much alarmed the patient as he suppos=
=ed mortification was coming on. Three Physicians were called in who not understanding the nature of the thing were dou=
=btful of that his apprehensions were too well founded Mr Hunter proposed that the Tunica vaginalis was ruptured and the colour was owing to the escape of the blood this proposition was readily agreed to and the patient was informed that in time the blood would be absorbed and the tunica vaginalis heal up but that he would be subject to a return of the com=
=plaint.

Rept of Hydrocele of the Tunica Vagi

Dr Else mentions a case of hydrocele of the tunica vaginalis which was cured by purg=
=ing. I have cured it by causing cold water to be spouted on it out of the spout of a tea kettle 2 or 3 times a day this method will often succ=
=eed in children sometimes it is absorbed without any acid when all these methods it is necessary to have recourse to an operation relief may commonly be obtained by evacuat=
=ing the water this is done by means of a common lancet which I prefer or an inst=
=rument called a Trocar which consists of a

Silver tube in which a stilette projecting beyond the Canula about 1/4 of an inch which part is triangular and sharp for cutting the trocar is to be pushed thro' the Scrotum into the cavity of the hydrocele when introduced the Stillette is withdrawn to suffer the water to pass off after that is done the wound is dressed by applying a strip of adhesive plaster and the part supported by suspendary bandage this is only paliative and is not sufficient to cure the disease completely but to produce a radical cure it is necessary something more should be done there are several modes of effecting a radical cure of which I shall now mention only 4 the object of them all is to effect an union of the tunica vaginalis and testis the more ancient of these is to make a long incision thro' the Scrotum so as to examine the state of the testis when it is ascertained to be free from schirrus lint is placed on the cavity between the tunica vaginalis and body of the testis to excite an inflammation of the part so that the true surfaces may adhere together the lint is to be left in till suppuration takes place freely it is then to be extracted when the tunica vaginalis adheres to the testis forming an union with it this frequently succeeds but it causes great pain and

Inflammation and it not unfrequently happens that Abscesses form after the patient is thought to be well I have seen Abscesses of some portion of thread being left behind 6 weeks after the wound had healed up this I have once seen but it frequently happens under this treatment the next method is by means of an eschar formed by Caustic this is next only attended with great pain and inflammation but causes a large suppurating sore to the no small distress of the patient. Mr. Else has proposed to apply it only of the size of a Shilling which he thinks would be sufficient to excite inflammation over the Cavity but this often produces violent inflammation of the whole Scrotum and sometimes mortification this method is however seldom pursued at present the next method is to pass a Seton thro' the Scrotum between the tunica vaginalis & testis this method is recommended by Mr. Pott but it is exceptionable because sometimes the junction of the Scrotum will take place only at the junction of the Seton with the tunica vaginalis and then the disease may again occur and likewise when there are Cysts on the body of the testicle this treatment will not do and these cannot be opened without laying open the tunica vaginalis but the cure

must be effected by suppuration Mr Earle has revived the method of throwing stimulating injections into the Scrotum he uses wine diluted with one third of water I have always used it with water some advise a solution of white vitriol and I have no doubt it would answer very well others have advised a solution of Corr. Sublim. but if this be used it should be employed very weak after the water has been drawn off an injection of wine may be thrown into the tunica vaginalis this will sometimes cause a good deal of pain across the lumbar region & has produced syncope It should soon be let out perhaps after 3 or 4 minutes Inflammation will come on in about 3 or 4 days but never runs high and soon subsides without any trouble If it be high V.S. may be proper frequently on the cessation of the inflammation the water again returns In all cases of that sort I have effected a cure by pouring cold water over the part to about half a gallon a day when the first operation fails it is not severe but that the patient will submit to it a second time when one or two injections will not do Mr Hunter proposes to make an incision of about

an inch long in the Anterior and up-
-per part of the Scrotum so that the
finger may be introduced to Ascertain if
there be any hydatids within and fill
the space between the tunica Vaginalis
and testis with flour or a small bolus
of dough to cause an equal suppura-
-tion over the whole Cavity after 4 or
5 days suppuration will have taken
place at which time the dough will
have become soft so as to resemble only
thicker pus in Consequence of mixing
with the fluids thrown into the Scr
Cavity the Contraction of the Scrotum
which takes place will throw out the dough
gradually and it is removed or evacuated the
Sides are brought into Contact regularly & the-
-sions take place and the Cure is Complete
I have performed this Operation several times
and believe it to be the best mode of curing it
I now show you the Method of injecting with
Urine the instruments are a trocar which
Consists of a Silver Canula about 3 inches long
with a small handle at the end of it in
this tube is a Stiletto projecting about 1/8
of an inch beyond its end and a Cock with
a Bladder or Gum Elastic bag fixed to the end
of it for Containing the injection the pat-
-ient is seated on the edge of a Chair and

directed to grasp the bottom of it with his hand be cause if his hands are at Liberty he will be apt to disturb the Surgeon when fixed in this manner so that the Scrotum projects over the edge of the Chair the operator takes hold of it and causes a tenseness of the tumor where he would wish to puncture and then pushes in the trocar as soon as the instrument has penetrated the Cavity the Stilette is withdrawn and the Canula pushed further into the Cavity to prevent the tunica Vaginalis slipping off the end of the tube which would prevent the water from passing out when the water is drawn off an injection of hot wine is thrown in retained a short time and then suffered to run out this wound is closed with adhesive plaster the Scrotum is suspended and the patient put to bed care must be had to keep the Canula thro the tunica Vaginalis, when you inject or else the whole of the Contents will be thrown into the Cellular substance without effecting its way into the proper place & a new operation will be necessary care should likewise be had to examine well were you puncture the Scrotum to avoid wounding the testicle which too often happens

A Gentleman troubled with hydrocele called a Surgeon to his aid who performed the usual operation with a trocar but to his great astonishment no water flowed out upon his withdrawing his stiletto another Surgeon was called who proposed the operation also nearly in the same place but with the same success. A third Surgeon was called but met with the same disappointment as the others they now agreed it was a very difficult case to understand Mr. Hunter's aid was then requested who upon examining the case & recollecting the peculiar sensation which the testis gives when squeezed tho' he could not feel its situation yet by the sensation caused by squeezing he found the testis to be attached to the anterior part of the scrotum when they had made the punctures the trocar had been pushed into the body of the testis he then pierced the scrotum at the lower and back part of the tumor where the testis usually lies and the water flowed out as is usual in common cases.

Lecture 23rd Of Lithotomy.

Calculous concretions are formed in different parts of the body I have found one of the size of a common pea situated at the basis of the tongue they are found in

the Salivary glands, in the Lungs, Uterus
&c but they are most Commonly found in
the Organs of Urine the incrustations found
deposited in the sides of the vessels which
hold the Urine prove that the Calculous
Matter varies in different persons with
respect to Quantity And it is greater at
One time than at Another in the Urine
of the Same persons It is not my intention
to enquire into the Consequences which disp
-ose the body to the formation of Stone
It being sufficient for my purpose to know
that it Can be formed by a deposition from
the Urine I have seen Concretions form
on the end of a Catheter which remained
in the bladder but for a few days the dif
-ferent kinds of substances which have
been formed in the Centre of Calculi prove
sufficiently that Any Solid body remain=
-ing in the bladder May form a nucleus
for a Stone the Stone is not Always of
One Uniform Consistence but Consists of
Several laminæ Or layers some of which
are hard And Some are soft they are like=
-wise of different Colours Some are nearly
white And Others dark brown the reason
of this difference I believe has never been
Satisfactorily accounted for Stone is not

Exclusively found in the bladder it is found frequently in the Kidneys And is washed Down the Urethra into the bladder tho' this is Not Always the Case when in the Kidneys it Causes pain And Uneasy Sensations in the Small of the back a Case of this Kind was Cured by in a Gentleman by riding on horse back from Germantown to Philadelphia but the same day he was Affected with a Sensation of a Stone in the bladder when Stones are formed in the Kidneys there is a Considerable difference from what happens when they are formed in the bladder Mr. Bloomfield has described the Symtoms so Accurately that I shall give them in his Own words when they exist in the bladder they Occasion that distention of viscus by preventing the discharge of Urine but when in the Kidney they prevent the Urine from flowing into the bladder Occasioning a great Accumulation of Urine And distention of the Urethra Above the lodgement of the Stone til the Column of Urine And distention be so great as to force it down into the

Bladder this Causes a good deal of pain but
when it is washed down the Ureter
into the bladder the patient is then
much easier the Stone is sometimes lodg=
=ed between the Coats of the bladder pro=
=ducing great pain the Stretching are violent
when the patient Complains of burning
pain in the bladder we have reason to be=
=lieve the Stone has found its way into the
patient should drink freely of barley water &
endeavour to pass the Stone by Urine he should
attempt this frequently by receiving his Urine
as long as he Can And then voiding it in
a full stream If this does not succeed the
pain becomes greater, the pain is the great=
=est after the patient has voided his Urine
when a Stone exists in the bladder the patient
feels an itching Sensation in the glans penis
Accompanied with pain & heat in the bladder
at the place were the Stone is lodged the
Stream of Urine is Suddenly Stopped at times
Causing great pain by the fall of the Stone on
the Orifice of the Urethra And at Other times
flows in a full Stream An uneasy Sensation
is felt Alo Along the Urethra from the perin=
=eum to the glans penis Causing a Sensation
of Something lodged in the passage and dispos=
=ing the patient to Squeeze And pull it Causing

thereby an elongation of the penis & prepuce som=
=times it is attended with tenesmus and prolapsus
Ani the Urine is pale and often mixed with blood
the digestion is interrupted occasioning flatulency
Costiveness weakness & fever supervenes and if
the Stone is not taken out death soon takes
place all the above symtoms however do not prove
it unequivocally as they sometimes occur from
other causes as inflammation & ulceration of the
neck of the Bladder or ulcers or tumors in the re=
=ctum. A case of a young woman came under my
care with the symtoms above descibed she was sound=
=ed 3 times but without finding any stone after
which Mercury was prescribed and the patient
soon after got well In this case I suspect there was
an ulcer in the neck of the bladder hemorrhoi=
=dal tumors not unfrequently cause these symtoms
sometimes the stone is incysted and the pat=
=ient never experiences pain because when he
moves about the stone is kept from falling on the
neck of the bladder when the patient disch=
=arges frequently small peices of calculous mat=
=ter he may expect the existence of a stone most
=ly the stone may be felt by sounding which is
the best way to determine its existence for this
purpose we use an Iron Instrument called
a sound tho' the attempt of the Surgeon to feel
the stone may sometimes be frustrated by its
situation behind and below the neck of the blad=
=der but if the Surgeon introduces his finger
into the rectum and presses that part of the
bladder up he will be immediately able to feel the stone

Many different remedies have been employed for for the Cure of Stone but they generally do no good Different Substances have been taken into the Stomach for the Cure of Stone and others have been injected into the bladder as a Solvent but Alcoholic Strong Alkaline Solutions are found to dissolve the Stone when out of the body and hence have been advised for the Cure of Stone the most usual remedies taken into the Stomach are Aqua Mephitica Alkaline Lime Water & Uva Ursi Medicines have likewise been advis- to be injected into the bladder to dissolve the Stone One great Objection to Medicines used as a Solvent is that they may occasion the Coats of the bladder to slough off and thereby endanger the life of the patient the Carbonate of potash has been serviable in some Cases Lime water is useful sometimes in relieving the pain and Uva Ursi has been given for that purpose Blood letting and Opiates are the best remedy for a fit of the Stone when those substances that are employed fail the operation of Lithotomy becomes necessary for the existence of the patient Before proceeding to the operation in Cold weather the sound should dip in warm water to prevent the Contraction of the parts the patient should be laid on a table or some Convenient place and then and the Surgeon proceed to introduce the sound having first oiled it with the Con- Cave part turned towards the bladder If it is not easily introduced in this manner

turn the Convex side toward the bladder and try again frequently the sound will pass till it comes to the membranous part of the Urethra and then suddenly stops no force should be used to gain an entrance lest the sound be forced out of the Urethra into the soft parts to avoid the fold in the Urethra which stops the sound the instrument is to be turned with the Convex side up and introduced till it comes to the membranous part of the Urethra it is then to be turned in such a manner as that it shall revolve exactly on its own axis and pushed into the bladder Some Surgeons turn the concave side of the sound toward the bladder and presisting that way for its introduction whilst others as tenaciously pursue the opposite plan this arises altogether from prejudice because they have been used to it always in that way, that way in which the Silver Catheter is introduced is so similar to the introduction of the sound that I shall not take away my time in describing the mode of introducing the latter when the sound is introduced into the bladder turnit in all directions if you do not feel the stone pass it further up the bladder if it is not yet found cause the patient to change his situation frequently when the stone has eluded the sound by placing by placing the patient on his hands & knees it has been distinctly felt when it is existance is fairly ascertained the operation may be

performed before the operation the patient should attend to his Diet for about 2 weeks And the day before the operation the patient should take a dose of Castor Oil to open his bowels, About an hour before the operation a glyster should be administered Some Surgeons advise to empty the bladder before the operation but I would advise to let it be moderately distended with Urine which will render the operation more easy the instruments necessary for the operation are first, have a table of the ordinary size, I commonly use an ordinary Nursing table whatever table is used it should be narrow so that the assistants can have an opportunity of holding without leaning over it which would tire and prevent them holding steady a blanket or something of the kind is to be spread over the table And pillows applied to support the patients head it will be necessary to be provided with warm water And likewise some sweet Oil as well as Ligatures and tenaculum for taking up any vessel there may be are ligatures must be provided to tie the hands to the feet to prevent the patient kicking these answer very well of worsted

Binding, next a grooved director a Scalpel a sharp pointed bistory a gorget to divide the sides of the neck of the bladder the point of the gorget should be so as to play easy in the groove of the Staff which is of great Consequence the groove is to be Clear of blood or Unctuous Matter And very Smooth & Clean. Forceps then are different Shapes & Sizes I would prefer the smaller One which have large ends for grasping the Stone if the smale forceps are not strong enough for the extraction of the Stone a Common Scoop such as the Accouchers use for extracting the Childs head may be introduced by the Side of them And Assist in drawing Out the Stone Sometimes the Stone is not Sufficiently firm to bear extraction but breaks in peices then the Smale forceps reach best if Any peices are broken off it May readily be Seen by examining the part extracted A Syringe has been found of Advantage in Flansing the bladder of Smale peices of Stone by introducing it through the wound And injecting warm water into the bladder the warm barley water envelope which will wash Away Any Smale peices that May remain It is necessary for the edge of the gorget to be very Sharp at the back & some force Must be used to puncture the bladder by which the gorget May go too far And wound the

Fundus of the bladder an accident of which kind happened to Mr Bloomfield the reason why this part of the instrument is mostly dull is because the Cutter cannot get at it to sharpen it on account of the beak to remedy this inconvenience I have got some made so that the side can be taken off leaving only the beak behind when taken off in this manner they can be sharpened at the point as easy as at any other part the sides are fastened only by means of a screw the old form of gorgets used to be but one edge, i, e, have but 1 edge to cut with the other being blunt but they are now used with two cutting edges so that both sides of the neck may be divided the edges used also to run from the beak in a curved or circular manner but I prefer them straight forming an acute angle I shall now show you the mode of operating after the director is passed the patient is desired to take hold of the outside of his foot or ankles when the surgeon passes the ligature which was previously fastened to the wrist round the foot at the same time an assistant secures the other two assis-tants stand by the side of the table each takes hold of the patients knee in his axilla and grasps the foot with his hands another

Assistant takes hold of the handle of the
Director and draws it to one side the Sur=
=geon then holds the Scrotum from the pe=
=rineum in which he makes the incision
from Above downward between the Anus
and Os. Ischium on the left side having
Cut thro' the Skin and Cellular Substance
feel for the Staff then take a sharp pointed
bistory placing your finger at the Sphin=
=ter Ani to prevent Cutting & Cut tow=
=ard your finger till you find the groove then
with a the bistory rest the back on the
finger and put the point in the groove of
the Staff laying it bare, the Surgeon
then places the beak of the gorget in the
groove of the Staff taking hold of the
handle of the Staff with his left hand
and bringing it to a right Angle of the
body the Assistant then takes hold of the
Scrotum and draw it up the Surgeon
then bears down the handle of the gorget
and pushes it into the bladder the Urine
which is now in the bladder escapes when
the gorget has got into the bladder the
Staff is to be withdrawn before the
gorget is withdrawn introduce the for=
=ceps then take away the gorget drawing
it Carefully so as not to make a new —

Incision the handle of the forceps should be turned upward as gravity would cause the stone to fale to the lower side of the bladder the forceps should never be held in one hand but one handle of them should be taken in each hand when you have gotten hold of the stone introduce your finger by the sides of the forceps to loosen any part that may be entangled and to place the stone in the best & easiest way for its escape from the bladder when the stone is extracted examine if any more are left in the bladder or if any peices are broken off the stone already taken out if any vessels be cut use the common means for securing them the patient is now untied his knees put close together and laid on his side in bed, not unfrequently as you are about to push the gorget in children they are seized with a straining fit the diaphram and abdominal muscles press the viscera of the abdomen on the fundus of the bladder and forcing it on to the neck of the bladder if you push in the gorget during this

straining you will certainly cut the fundus of the bladder If it come on after you have divided the neck and the urine evacuated it will be safest to withdraw the gorget, the operation of Lithotomy is much easier in general in females. Some have advised to introduce the Staff into the bladder and then with a bistory make an opening into it from the Vagina and extract the Stone from the bladder thro' the Vagina Sometimes this Mode of Operating answers very well I have performed it in this manner and the wound healed very well I however prefer the Gorget.

At our next Gentlemen we shall speak of Amputations

Philip. S. Physick

Lecture 24th Of Amputations.

I told you that when treating of wounds when the parts were injured that they could not recover, Amputation becomes necessary if this is delicate inflammation has supervened we must then wait till it has subsided Amputations likewise become necessary from tumors as white swellings of the joints, Diseases of the joints often produce hectic fever And the patient becomes much debilitated by Nigh Sweats loss of Appetite &c And Amputation is necessary for his restoration If the patients stomach be good never fear to Operate tho' he be much emaciated the ancient Surgeons advised Amputations in Cases where Mortification had taken place And whilst it was progressing this practice should Always be Avoided the limb if taken off in the progressive state of Mortification the Stump will be attacked And the patient subject to Another Operation But if the Surgeon wait till the Mortification has stop'd And the dead part Suppurated the bone Only will remain to be Cut which will give but little pain to the patient Another Cause of Amputation is large tumors Causing the the Absorption of the bones & joints Also fungus hæmatides And Cancers situated when they Cannot be extirpated I shall now show you the

Manner of Operating. Sometimes we have to am-
-putate the finger if the disease is at or near the
end of the finger it will answer very well to take
it off at the first joint the incision should be
made thro' the Skin and Cellular Substance
a little below the joint so that a portion of
Skin be left to cover the joint this done the
edges of the Skin are to be brought into Contact
and secured by a roller which as the arteries
are so small will be sufficient to prevent any
hemorrhagy Sometimes the finger has to be
taken off at its articulation with the met-
-acarpal bone all that is necessary then is to cut
between the fingers till you come to the joint then
after the finger is taken off and the vessels secured
by ligatures bring the edges together and apply
adhesive plaster a roller is then to be passed
round the hand Sometimes we have to take
the metacarpal bone away this may be done
either at its articulation with the Carpus or
sawed off at any part where it is necessary
with a metacarpal Saw, first separating
it from the other parts by making an in-
-cision directly over the bone from between
the finger down to the place where you would
wish to take it off If any vessels are cut take
them up with the tenaculum bring the edges
in contact with adhesive plaster and apply a
bandage round the head of the leg and first of the
things necessary to perform the operation a Compress

Bandage or tourniquet these are to be applied if the leg is Amputated just above the knee but if the thigh is taken off they are to be applied near the Groin a Straight knife this should be very sharp else it will only Mangle some parts And Cut others for if it is dull it will throw the Skin in folds the knife and the Surface of the divided edge will be very Unsoven & Ragged a Scalpel will be wanted a Catlin this is a knife with two Cutting edges, a retractor this is a piece of leather with 3 tails, the Middle portion is passed through between the tibia & fibula to hold back the Soft parts while the bone is taking off a Saw for Cutting off the bone. It is necessary that the Saw be Set wide else by binding in the kerf it will be apt to break off the bone before it is Cut thro' leaving portions to be broken off with Nippers, a pair of nippers to break off any Smale Spicula that may remain a Tenaculum, besides these it is necessary to have some warm water, Sponge, Needles Ligatures and adhesive plaster, tow & two bandages of linen Called lingets In proceeding to the Operation the patient is laid on a table, Covered with a blanket or fine Matras the Compress is first laid on the Artery And the tourniquet applied on it to Stop the Circulation about an hour before

the Operation the patient should take a dose of Laudanum not so much to ease the pain as to give him fortitude and fit him to undergo the operation because some patients cannot stand it I have seen one person faint 3 times under the same operation. Screw the tournaquet till the circulation is stopped In order to ascertain when this effected I commonly lay my fingers on the Anterior tibial Artery while the assistant screws the tournaquet by which I can tell as soon as it is stopped when the injury is low down near the foot the Surgeon has his choice where about to operate If it is a patient of high life who wants to have the appearance of 2 legs and go in company and who can afford to have an Artificial one leg It may do to operate as far below the knee as convenient But if it is a poor man who has to undergo hardships he can illy afford an artificial leg and should have the operation performed just below the knee he can then bend his knee and bear his weight on the parts naturally formed without much inconvenience from the projecting stump which would be greatly in the way was the leg taken off at the ankle the inconvenience arising from a stump projecting so far behind is so great that a person subject to it underwent a 2nd operation to get rid of it in proceeding to operate let an assistant

First draw up the Skin then take a Straight knife and make an incision round the leg It is not necessary that this be made all at once stroke as some Surgeons advise. I have the Surgeon place himself in such a posture to make the incision like at one stroke that I was really afraid he would cut a piece of his nose off which might have been done by the least slip as the floor was sanded to catch the blood some Surgeons advise to make the incision straight to the bone but I would advise it to be made obliquely so that the flesh on the back part of the leg may come in contact with the Skin of the fore part and completely cover the end of the bone after you have cut round through the Skin and cellular substance dissect the Integuments from the muscles and turn them back if this cannot be done they must be drawn back and divide the muscles down to the bone this done take the cattin and divide the interosseous Ligament and muscles and press the middle strip of the retractor between the bones to draw back the soft parts then saw off the bones. Some advise to hold the saw so as to cut both bones at once but this is often inconvenient I mostly saw the fibula first and then the

Tibia it is necessary to make long strokes
with the saw when the knee becomes stiff
and after the leg is cut off wash the sur-
face with warm water and then search for
the principal artery which must be drawn
out with the tenaculum and secured
by a ligature after the principal artery and
all that can be seen are tied the tourni-
quet should be loosened to see if any of the
flesh arteries bleed warm water should be
poured on the part and the patient have
a little wine & water to drink to excite the
circulation and expose all the bleeding vessels
that will bleed when all are secured wash
away all the clots of blood and draw down the
integuments over the ends of the bones and wrap
a bandage round the stump to prevent the
contraction of the muscles. Secure the edges of
the wound by means of adhesive plaster before the
adhesive plaster is applied the ligatures are to be
brought out at the corners of the wound a piece
of lint spread with cerate is applied between
the edges to prevent their union by before the
ligature have come away this will prevent
the serum from being thrown out and an
abscess will be formed causing great pain to the
patient after adhesive plaster apply dry lint
spread with simple cerate then a pledget
of lint or tow then the dressings in a conical
form and secure them by a roller the tourniquet

Should be left on tho' loose after the leg is dressed to be in readiness if hæmorrhage should take place the patient should be put to bed and his leg rested on a soft pillow I shall next show you the mode of amputating the thigh the instruments are nearly the same only the Catlin is not wanted nor need the retractor be slit in two places but only the middle this operation is to be made as low down as possible but so that none of the diseased parts are cut after making an incision tho' the skin distect the integuments as in the other case and divide the muscles down to the bone this done apply the retractor and saw off the bone after washing it take up all the large arteries and likewise the large veins In old people the arteries are sometimes ossified. I then pass the needle round some portion of the muscles including them in the ligature the better to prevent hemorrhagy all the other processes are alike, I have described in the leg.

Of Bronchotomy. Sometimes a swelling or obstruction of the asperia arteria take place to such a degree that an operation becomes necessary this operation is performed

between the Cricoid and thyroid Cartilages, first make a longitudinal incision down to the Cartilage and then make a transverse incision between the two Cartilages just mentioned into the Cavity of the trachea and introduce a Silver Canula which is to be secured in its Situation by means of tape passed thro the holes at the base of the Canula and round the neck of the patient this is a very easy and safe Operation no vessels running in the way to Cause hemorrhagy. I shall next speak of Ascites

Ascites, Is a Collection of water within the Cavity of the belly for which it is sometimes necessary to perform an Operation Called Paracentesis. the Operation is generally performed on the left side about half way between the Superior Anterior Spinous process of the Illium and navel the left side is preferred for the purpose of avoiding the Liver the Celebrated Dr Cline in performing this Operation wounded the Epigastric Artery and the patient was suffered to die of hemorrhagy, I say suffered because he ought to have Cut down to the bleeding vessel and secured it this made suspicious in Operating at the side he therefore proposed making the Opening about halfway between the Os pubis and navel notwithstanding the tendinous

But there is perforated however Contrary to
May Seem to theory heals up as Soon as Any
Other part the Urine should be first Always
evacuated, this Operation is generally performed with
a trocar the Stillette of which Some Surgeons
have made flat this must be very inconvenient
And risque a great deal of force to push the Can=
=ula into the belly, Others have the Stillette tri=
=angular, It is of the greatest Consequence to
Ascertain whether the tumor be really a Collec=
=tion of water or not If the tumor Contain
water it may generally be told by the fluctuat=
=ion, An Actress who had been Several times
tapp'd for Ascites, believed herself to be Afflicted
with a return of the Complaint and applied
to a Surgeon for relief he seeing the Scars
plunged in the trocar in the Same place
but to his great Astonishment no water
flowed In About 8 days she died and exam=
=ination traced the wound into the Uterus.
And in the hip of the Child I generally perform
this Operation with a Common Lancet which
Answers very well And instead of a Canula
introduce a large female Cathuter the round
end of which will be more easy And less liable to
be stopped up by the intestines Coming in

Contact with the Orifice which is in the side of the Catheter, but in the end of the Canula and will allow water to flow out without interruption the patient sometimes while the water is flowing or just after faints he should have some wine & water given him and a degree of pressure made on the Abdomen to keep up some of the pressure that existed before after the water is all drawn off withdraw the Catheter and bring the edges of the wound in contact with adhesive plaster and apply a Compress over the Orifice this done pass a roller round the belly for its support

Lecture 25th. Of Aneurisms.

An Aneurism is a morbid dilatation of the heart or some other part of the Arterial System Aneurisms are divided into true & false the true are such as already described and are attended with the no wound or division of the Coats the false are such as occur from accident independant of any disease in the Artery I shall confine myself principally to true Aneurisms there is a great attendency at one time than at another they may occur in the Aorta and different parts of the body at the same time but mostly confined to one part of the Arterial System only which yielding to the momentum of the blood

Grows weaker & weaker And at last bursts the
proximate Cause of Aneurism is a disproportion of
the Momentum of the blood And the power of the
Artery of the remote Causes of Aneurisms we know
but little Excessive drinking of Ardent Liquor
is said to be One It has been supposed by
some that violent strains by the foundation
of Aneurisms I have seen twice false Aneurism
of the brain from Contusions, It has likewise
been said that Aneurisms have been occa-
-sioned by bleeding in Consequence of the lancet
passed thro' the vein And dividing or injuring
the Outer Coats of the Artery leaving it too
weak to resist the force of the blood To
Ascertain this Mr. Hunter laid bare the
Carotid Artery of a Dog he then dissected
away the Coats of the Artery One After Ano-
-ther till he Came to the internal polished
Coat the wound was then tied up And the
dog left to himself About 3 weeks after this
the dog was killed the Artery was examined
And found to be of the Natural Size not hav-
ing dilated in any wise And the Coats
were Consolidated to the Sides of the Artery
And got well the Circumstance which lays
the foundation for Aneurism is a diseased
State of the Artery And such a diseased State
renders the Artery too weak to resist the im-
peter of the blood An Aneurism is not hint

Simply a dilatation of an Artery but there is likewise roughening of the internal Coat which at times becomes becomes Ossified Aneurisms Occur it is said less frequently in men than in men I have however seen several Cases of Aneurisms in women they Occur most frequently in young people It is of the greatest importance to distinguish between Aneurisms, Tumors of any kind tho' the difference is obscure and often not to be percieved especially in Old Aneurisms In recent Aneurisms the pulsation can always be felt by pressure but after some time when the swelling and tenseness are much increased putting the parts on a stretch and the Coagula are formed the pulsation becomes obstructed because the stroke of the heart is to be continued thro' the finger thro' the Coagula In a recent Cases we can remove the blood contained in the swelling by pressure made for some time on the part tho it will soon return when the pressure is taken off whereas a tumor remains immovable A tumor may form upon an Artery or be so situated as to partake of the pulsation and they in that respect resemble Aneurisms But we can place the finger behind it so as to push it up from off the Artery and pulsation ceases, Even when we cannot raise the tumor from off the Artery we are still able to distinguish it from an Aneurism by the particular pulsation

For when a tumor is seated on an artery we are sensible of the whole body moving when dilatation take place on the thorax it is known by the palpitation of the heart and difficulty of breathing when the dilatation of an artery has commenced its progress is much slower than we would suppose because the impetus of the blood as the artery dilates is divided over a large surface it does not advance all at once but encreases gradually coagula forming as the sac distends the aneurismal bag as it enlarges contracts adhesions to the parts around it and the internal parts wear away to a great size the dilatation of an artery mostly takes place on that side which is most remote from the heart or that on which the impetus of the blood acts most powerfully tho sometimes they are equally dilated the pressure they frequently occasion causes the absorption of the surrounding parts I have seen a portion of ribs absorbed by it in this manner it goes on till it arrives at the skin when it bursts and the patient dies by a sudden gush of blood in an aneurismal sac there will be found a number of coagula or lamina the general indication in the treatment of com=mon aneurisms is to lessen the quantity of

Blood in the trunk of the Arteries, Rest, low-
diet &c are Also necessary bandages have been
applied likewise, I shall speak Chiefly of
popliteal Aneurism the Surest method of
Curing Aneurism is to take up the Artery
the mode of performing the operation some
Years ago was to make an incision into the
Aneurismal Sac while the tourniquet was
secured tight upon the upper part of the thigh
And after discharging the blood to tie up the
Artery just Above the Sac but this is frequently
unsafe on Account of the diseased State of
the Artery which would be likely to burst at
the place where it was tied to remedy this
Mr. Hunter proposed taking up the Artery
About half way between the hme and Anterior
Spinous process of the Ilium to Avoid hemorrha-
gy which frequently takes place from the dis-
eased and opific state of the Artery which
would not Allow the sides to unite the limb
will be nourished by the Anastamosing branches
It however sometimes happens they are not suffi-
cient for the Support of the limb and mortifica-
tion ensues this I suppose is not Owing to a want of Defic-
iency in the size or number of Anastamo-
sing branches but to the tenseness & Swelling
Obstructing the Circulation I saw one Case
of this kind but I suspect that was Owing
to the tumor preventing the Circulation in

the Anastomosing branches in proceeding to perform this operation first have a tourniquet fixed on the upper part of the thigh but not tight allowing the Artery to pulsate then make an incision about 3 inches in length longitudinally in the course of the fibres down to the Sartorius Muscles and dissect along the lower edge of it It is necessary to pay particular attention to this for if you get above the Sartorius Muscle you may cut down to the bone and not find the artery after you have dissected thro' the Skin and Cellular Substance feel with your finger for the pulsation of the Artery It is best to use the handle of the knife for opposing the Artery as there are a great number of Anastomosing branches which would be probably wounded by the Sharp edge of the Scalpel there is a thin facia before you come to the Artery thro' which you must scratch with the point of the knife a little to one side of the Artery to avoid the danger of wounding it after the Artery is brought into view it may either be taken up by passing one ligature round it by means of a Silver Bodkin or as Mr. Abernethy advises by passing a Couple round to about 1/2 an inch distance from each other and then

separate the Artery between the ligatures by which means he says the ligatures come away sooner the Artery is divided to take off the tension I have seen the ends recede 3/4 of an inch from each other when divided In which ever way it is performed the ends of the liga=tures are to be brought outside of the wound and a pledget applied so as to press the bottom of the wound closely together that the outside of the wound may not heal too soon and thereby form an abscess I have seen an abscess from this cause extend from the knee to the anterior spinous process of the Ilium. Aneurismal tumor after this treat=ment mostly disappears, But this is some=times not the case and the tumor goes on to suppuration If the tumor after it has suppurated does not open of itself by the ul=ceration process it should be opened by an in=cision when this is neglected very serious con=sequences occur I once knew it to produce an abscess of the joint of the knee and this pat=ient died when the artery bursts and allows the blood to flow into the cellular texture the pulsation may be perceived at first but the blood stagnating there soon coagulates and swelling and tension prevents the swell=ing pulsation being felt and then it is im=possible to say whether it be an abscess or an aneurism when this occurs we should appe

A tourniquet above the tumor and make a puncture into it If it be an abscess the matter will flow out, If it be an aneurism the artery must be tied up when the tumor is great part of the coagula should be scooped out at the puncture to relieve the tension In 8 or 10 days the tumor will have suppurated and the extravasated blood have come away

Of False Aneurisms

There are two kind both occurring from wounds in the artery one occurs from ~~of~~ in consequence of the lancet puncturing thro the vein into the cavity of the artery and letting the blood flow out of the artery into the vein. this forms what is called varicose aneurism It may be told by the thrilling sensation, which is easily distinguished, a hissing noise may be heard by applying the ear near the orifice. Sometimes the two orifices do not exactly correspond with each other, and then the blood instead of flowing into the vein escapes into the cellular substance and forms a true aneurismal sac, communicating with both the artery and vein, causing great pain to the patient and if an operation is not performed, the skin becomes tense and then bursts or sloughs away, bleeding profusely and throwing the patient into the greatest danger. The varicose aneurism is free from danger, and therefore no operation

should be performed the only inconvenience ar-
-ising from to is a little deformity arising
from the dilitation of the vein at that
place But when the blood escapes into the
Cellular Substance an operation becomes
necessary the artery and vein should be se-
-pared both secured above and below the
sac tho' the varicose aneurisms do not
require an operation in general yet some
of their modifications do.

At our next meeting Gentlemen I
shall speak of Fistula in Ano.

Lecture 25 th Of Fistula in Ano.

Of. This is a disease of called is a cavernous ulcer
situated in the cavity of the anus it frequently
consists of 1. 2 or 3 cells and is caused by infl-
-ammation If the parts are greatly inflammed
and a violent tumefaction ensue it produces
dysury bearing down pain and sometimes an
entire suppression of urine when it arrives at
so great a height it generally terminates in
suppuration forming an abscess and making
an opening externally or into the rectum or both
If it communicate externally only it is called
incomplete fistula If it communicate both ex-
-ternally and with the rectum it is called
complete fistula but if it communicate with
the rectum only it is called blind or occult

Fistula to examine well the State of the parts the patient should lean over a table. And the Surgeon having his finger well Oiled should introduce it into the rectum And insert a probe into the Abscess if he can feel the point of the probe the fistula is Complete but if the fistula be incomplete he will not be able the probe Sometimes the Abscess is Smale resembling a bile And is easily Cured Sometimes the side of the rectum is Separated And detached from the Buttock to a very great extent rising even to the brim of the Pelvis the Causes which Occasion these Abscesses are Such as Occasion inflammation in Any Other part of the body we should Examine very well in All Cases of pain in the Region of the Anus to discover whether it Originates from piles if not So that Medicine may be used to Avoid Suppuration when we are Consulted by a patient Concerning a pain Situated in the region of the Anus however disagreeable it may be to the patient or the Surgeon we should Always examine into the real Nature of the Complaint when inflammation And Swelling are found our first endeavours should be to Avoid Suppuration blood should be drawn According to the nature of the Case And the Constitution of the patient. Purging. Leeches poultices of the Milk & Bread. the warm Bath should be tried Sometimes these remedies fail And the tumor encreasy to such a size as to

Occasion a total suppression of Urine a Cath=
=eter should be introduced for the relief of the pat=
=ient which may be left in a considerable time
without any bad consequences resulting from
it the Catheter should be made with Gum
Elastic which can adapt itself to the shape
of the part and will be worn with more ease
than a Silver One Sometimes inflammation
comes on in the Buttocks with a dispos=
=tion to Gangrene on this Subject I would
advise you to read Pott tho I would ad=
=vise you from the success I have experience
in such cases from the uses of Blisters to
apply them in similar cases If the Sur=
=geon is called in early he may generally
resolve inflammation but unfortunately
we seldom see such cases the suppurat=
=ion has taken place when an operation
is necessary for a cure In all cases when
there is a collection of Matter we should
make an opening into the most promi=
=nent part and not wait for it to open
naturally in all cases we should pursue
the Antiphlogistic regimen until the
inflammation subsides, I shall proceed
to mention the circumstances which ren=
=der it difficult to perform an ~~operation~~ cure
without a Surgical operation 1st When the
fistula is incomplete the formation of Pus

keeps its sides distended and prevents its healing
and next in addition to this ulceration of
its sides prevent its healing If the orifice is
small so that the matter cannot readily flow
out it collects in the cavity and the granu=
=lations cannot come in contact 2nd the
suppurating cavity is prevented from healing
by the external orifice closing up too soon &
here the patient thinks himself getting well but
his hopes are soon disappointed for the matter
has either to force its way out again or make
a new opening 3rd when the fistula is com=
=plete faces pass into the opening and are pres=
=sed thro' out at the external orifice when we
go to stool, when occult the matter makes its
way into the rectum and will be discharged
in that way but it will frequently be obstru=
=cted by the faeces tho' in most cases the open=
=ing goes obliquely downward and when the pat=
=ient goes to stool the faeces will close up the
orifice but I have seen cases where the orifice
opened upward into the rectum and whenever
faeces were voided would get into the abscess and
extend to very much causing great distress to the
patient 4th when nature is unequal to the
cure without the assistance of a surgeon as 1st
when the cavity is on one side of the sphincter
and the patient goes to stool the contraction of
the muscle will draw the detached side from

its natural situation destroying all the newly formed granulations and preventing its cure
2nd Another obstruction to the cure is when the patient goes to stool the gut is somewhat protruded and any adhesions that may have taken place in its contracted state are destroyed It is to this cause the small portion of blood is owing which appears after stool
5th when owing to some cause the fistula is prevented from healing for some time the parts become callous as was before explained 6th the practise of introducing substances into the abscess as stuffing it like a Lint called by some Surgeons dreping to the bottom
7th when the extent of the fistula is carried a considerable way into the pelvis and even to the upper part of the brim accompanied with caries nature seldom effects a cure and even the art of the best Surgeon is often foiled
8th the general health of the patient this should be attended to as it will assist greatly in the cure the operation for fistula in ano consists in dividing the sphincter and dota=ched gut be cause when cut it prevents it from acting so as to irritate the granulations and 2nd the faces can pass readily out with=out protruding the rectum for information on the particular manner of performing this operation I would advise you to read Pott My object has been to show the principles upon which healing is effected altho I shall make some

Remarks upon the Mode of Operating when the fistula is Complete the patient is to be laid on a table then the Surgeon after oiling his finger is to introduce it into the anus then introduce a bistory thro' the fistulous Cavity till it Comes in Contact with the finger Draw away both finger and bistory together the bistory divides all the parts between the upper opening at which it was introduced into the rectum and the external end of the rectum It divides the Sphinc-ter and rectum from its upper Communication to its extremity In the introduction of the bistory the patient will feel Considerable pain from the edge of the instrument Cutting as it is inserted to remedy this I have a Silver Cap which goes on the point end of the bistory and extends along to one side of the handle a little wider than the blade which secures the edge when the bistory is introduced by pushing a little knob at the end of the Cap it falls off leav-ing the edge exposed another method when the Silver Cap is not a hand, is to place a piece of waxed linen on the edge, this should be long enough to reach to the end of the handle, so that when the bistory is introduced, we can draw away the linen, and then divide the parts, this mode answers very well. Sometimes the opening into the rectum is low down, so that we

cannot pass a director from the abscess into the rectum, and out at the Anus. In this case the parts may be divided with a scalpel, but when the fistula is so high up, that to divide the parts with a bistory might endanger hemorrhage, we should pass a ligature thro' and bring it out at the anus, and tie it, tho' not so tight as to occasion pain, this will evade the hemorrhage, and the part within the ligature be divided by ulceration the wound occasioned by the ligature will heal nearly as fast as the ulcer goes on, so that by the time the ligature has cut, thro' the wound will be nearly healed up, tho' sometimes it does not heal up so fast

Of the Hare Lip. This has derived its name from the resemblance to the lip of an animal of that name, it mostly takes place in the upper lip and but on slit, tho' sometimes, the lip is divided in two places. these accidents are most frequently born with us, or in other words congenital, tho' they sometimes happen from accidents, when they occur

at birth, the sutures uniting the maxillary bones together, is at times not perfectly consolidated, owing to want of gentle pressure of the lip, In such cases, the lip should be united immediately. In proceeding to do this, we should have a pair of strong sharp scissors, which are preferable to a scapel, and cut a small thin piece out of each lip, taking care to take out the upper angle, or else the lip however well united below, will not heal above, the piece cut out resembles an inverted V. after this is done, the edges are to be drawn equally together, and secured with two common silver pins, in such a manner as to form a figure 8, the pins I use are silver having steel points which are to be taken away, as soon as the pins are applied to prevent their hurting the patient, this is especially necessary in children, the pins should be left in about four days, when they may be withdrawn. this may be done, by twisting hold of the end with a pair of nippers, as the pins, will hold pretty fast, lay your finger on the thread to prevent pulling it off. the thread may be left, for one or two days afterward by which time it will be perfectly well, the thread

will be agglutinated, to the part by the mucus of the nose.

Structure of the Urethra

By the term structure is meant, a diminuation of any canal at a particular point, when they occur in the urethra, they most commonly happen at the bulb, tho' they sometimes take place at the middle of the urethra, and sometimes beyond the bulb at the membranous part tho' rarely. They are of two kinds Spasmodic and permanent tho' the two kinds are not unfrequently combined the first effect of a structure in the urethra is two lessen the flow of urine, and sometimes the patient does not suspect any disease, untill by voiding his urine it passed in two streams or diminished, he will have now frequent trials to make water, passing a little at a time, and this is not without considerable straining, the parts existing, between the bladder and structure become very much distended, and the other part diminished, resembling a string tied round the penis, the structure most commonly runs regularly round the urethra but not always A Gleet in general attends it, owing to the irritation, there is in passing the water. Sometimes the structure is only on one side. Whenever spasm

supervene on such a stricture, the passage is completely closed, the causes are cold weather cold feet, and the intemperate use of strong drinks and I had one Patient in whom it was caused by <u>coition</u> from to long a retention of urine. The great difficulty there is to ascertain the cause is the reason that the suppression is generally not treated successfully. <u>Treatment</u> the permanent stricture in common may be dilated with a bougie. much depends upon the preparation of Bougies and their make. In general use waxed linen. Pieces of linen being cut to a point, waxed and rolled up make the best Bougies, the point must be small, but the body must be stiff to bear the power requisite for introducing it, the Bougie may be introduced as far as it will enter, and left sometime with its point in contact with the stricture, till the irritation has subsided and then press it gently forward by which means it will frequently overcome it commonly when the Bougie is introduced the patient will faint, and a cold sweat break out over him, this seldom happens after the 3d introduction of the Bougie, when the stricture is small, it may then be dilated. we sometime succeed by letting the patient pass a bougie —

down to the stricture for the space of an hour or two every day, sometimes the canal is thrown to one side, making the passage irregular, when this occurs the point of the Bougie is to be bent, to one side and then introduced. Sometimes the irritation and presence of urine accumulated in the parts causes ulceration of some of the soft parts behind the stricture forming an artificial opening, called Fistula in Perineo. In such cases there are two modes of relief either by the caustic or by the lancet, the use of caustic was first introduced by Mr Hunter and afterwards by Mr Home. I have used it myself in several cases with very good effect, the caustic is rolled up in the end of a Bougie and tied by a piece of fine thread, the end of the caustic may project a little to prevent its burning, the canal, before it gets to the stricture, a small cap of waxed linen, &c. tied to a fine thread and fixed on the end of it answers very well. When the Bougie is passed down to the stricture, the cap may be withdrawn by means of the thread, when the stricture is at the bulb of the Urethra or before it, it may be divided by a lancet defended with a silver canula. The distention of the Urethra behind the stricture makes it almost impossible to divide any other than the structured parts, when the canula is introduced

to the stricture the lancet may be pushed thro & divide it. But the circumstance of the curvature of the urethra makes it difficult to divide it further back, and a curved canula answers very well in such cases where the stricture is dilated. a Bougie or Catheter should be introduced and kept there for several days, when if there be a fistula in Perinco, it will heal up in a a few days. In Spasmodic strictures, to treat them with Caustic is hurtful. the warm bath or a small piece of Tobacco at the end of a Bougie introduced, to be in contact with the stricture will frequently give relief or a Plaster of it. Liquid Laudanum & Emetics have proved useful

Of Cancrous Breasts —

and the mode of extracting it. when tumors are formed in the breast, if they do not yeild to the antiphlogistic treatment with the use of Mercury it is best to extract them early, there are two method of extracting them 1st by Caustic 2d by incision or the knife, the latter method is the best, as we are better able to distinguish between the diseased and sound parts. Before proceeding to the operation. we should examine well, to discover whether the disease has —

reached the glands in the Axilla and also whether the glands in the neck are diseased. If the disease has reached the glands in the Axilla and the skin is sound the operation is easy, but when ulceration has taken place, it is much more difficult when the skin over the tumor is sound one incision is enough, if ulcerated two, made directly over the middle of the breast. after making the incision you should carefully dissect the tumor off from the pectoral muscle & when any arteries are cut you should immediately stop and tie them, for if they are not tyed immediately, they contract and are drawn within the cellular substance, when you will have a considerable difficulty to find them. as soon as the tumor is removed the coagulated blood is to be washed away with warm water and the skin drawn together, with adhesive plaster spread on Linen, as Leather is apt to rot. When the disease has reached the axillary glands, the operation is much more hazardous. In this case, we must continue the incision in the course of the Lymphatics to the tumified gland or glands in the Axilla and remove the gland and indurated lymphatics with the tumor as the object of operating, is to remove the disease, we should take great care, to cut in the sound skin, or else the patient will suffer the pain of the 1st operation for nothing and a 2d becomes needfull.

Of the Operation. having previously shaved the hair off the arm pit, the patient is to be seated on a chair and properly supported by assistants, an incision is then to be made, commencing at the upper part of the arm pit, and continued down the outside of the Mammea, down to the Lower part, another incision is then commenced at the upper part of the breast and continued down the inside of the breast till it meet the 1st Incision, the tumor is then to be carefully dissected off the breast, and afterwards to continue the dissection up to the glands, in the arm pit, and remove them all together. It is often difficult to get at the glands from their close situation in the axilla, but the weight of the tumor of the tumor if it be large, will draw them down so that you will be enabled, to get your finger above them, to tie a ligature round them, which should always be done, before they are separated on a account of the many vessel of that part, some patients have actually died to death, owing to the neglect of this precaution, the ligatures after 6 or 8 days will come away. When the tumor is taken out, the edges of the wound, are to be brought in contact and secured by adhesive plaster, that they may unite by the 1st Intention. —

There is an other method of removing cancerous tumors less terrifying to the patient. I mean by Caustic. but to this there are several objections. 1st It is impossible for us to remove so accurately the diseased part from the sound part and 2d it is more painfull, this I was informed of by a patient from whom I removed a cancer with the knife who previously had one removed by the ~~knife~~ Caustic

Of Extirpating the Scirrhous Testicle

Before proceeding to this operation, a nice examination should be made, for if the spermatic cord be found hard & scirrhous the operation should not be attempted the incision should be commenced above the hard part of the spermatic cord. and continued down to the Scrotum making a free incision down into the substance of the diseased testicle together with some of the Spermatic cord, it is then to be dissected out. A Ligature is then to be tied round the Spermatic cord, leaving out the Vas deferens the Testicle is then to be removed, and the skin drawn together and secured by two or 3 stitches

Of Hemorhoidal Tumors

These are small tumors situated near and sometimes within the Anus they frequently bleed, and sometimes to an alarming degree. When they are seated

within the Anus, the patient experiences, considerable pain in going to stool, and sometimes the rectum is protruded, producing the disease called Prolapsus Ani, the patient is generally troubled with Costiveness and flatulency and they sometimes cause suppression of Urine. Cure the patient should be kept in an horizontal position, and Leeches should be applied, a Bread & milk poultice moistened with Lead water, and some unctious applications sometimes give relief, but this is generally palliative. An operation is generally necessary to perform a cure there are two ways of performing this Operation viz by ligatures and by the knife, when the operation is done by the knife, a large and sometimes a dangerous hemorrhage ensues, but when ligatures are employed the hemorrhage is not so great, the operation by ligatures is therefore safest, with this view, a piece of flat bobbin, when the base of the tumor is small, is to be passed over the tumor and drawn tight, by which means the circulation will be stopped, and the tumor will fall off. But if the base of the tumor be large, there it is best to pass a needle, armed with a double ligature, thro' its base, and the two ends of the ligature singled, are to be tied on each

on each side of the tumor, by which it will be cut off in a few days, when the tumor is situated within the rectum, the patient should take a brisk Cathartic, by which the tumor will be protruded when you must seize it with a tenaculum and fix a ligature round it by which means the circulation will be stopt and the tumor will drop off in a few days.

Of Morbus Coxarius or disease of the Hip Joint. The nature of this disease ought to be carefully investigated as it causes the patient a great deal of pain and uneasiness and lameness. It mostly attacks children of 4 or 5 years of age the 1st indication of the disease is the child refuses to walk or step and when compelled to walk it observed to go lame frequently the general health is not impaired, the diseased limb is observed to be longer, than the sound one, owing to the child favouring that one, by ~~having~~ bearing its weight chiefly on the sound one. It is frequently attended with pain from the beginning, but that does not however always attend, and when it is a concomitant, it is often delusive, occurring not in the hip but in the knee, this very frequently deceives the

patient and often the Physician is so deceived as to apply substances to the thigh instead of applying them to the Hip. Hip, the three movements admits of full flexion and extension, without imparting any pain to the patient. Proves clearly that the disease is not seated there. Pain when it attends is not always constant, but comes on at intervals and continues for an hour or two and then ceases. It is often worse at night. After the disease has existed for some time. A swelling and enlargement of the hip and adjacent soft parts takes place the Hip loses its natural shape, the greatest tumefaction is observed on the side of the thigh near the great trocanter, and now pressure or touching the Hip occasions pain, if the patient stands up, he always rest on the sound side, bearing no weight on the diseased side, but bends the the knee of the diseased side forward, and the toes touch rest only on the floor. The disease of the Hip joint is often mistaken for a disease of the Spine. It may however be readily distinguished from a caries of the spine, by laying the patient upon his back on a table for if only the hip be affected, you can easily straighten the course of the spine

Causes It frequently comes on without any apparent Cause, but it often occurs from blows on the hip and from jumping &c after some time it progresses, the patient becomes febrile, and the limb which was before observed to be the longest, suddenly becomes shortened, this take place in consequence of the bone being pushed out of the Acetabulum, by tumors forming in the socket, and the head of the bone is drawn upwards by the action of the muscles on the dorsum Ili this circumstance of luxation by means of disease in the joint has given rise to the term spontaneous luxations, In common the luxation is upward & backward, but sometimes it takes place downward & forward from gravity acting and the muscles unable relaxed, sooner or later suppuration takes place, & the bone is found in a carious state. Suppuration however does not always take place, for it has happened, that a new acetabulum has been formed which would allow of some motion to the limb. When suppuration has taken place it is attended with more or less pain, and the matter which is formed, is discharged by

by one or more openings. In this stage the patient
the patient very frequently loses his appetite he
becomes very much emaciated has night sweats
and hectic fever ensues the articulating cartilage
between the head of the bone and Acetabulum
is wounded and disappears, and then of the
bone rubbing against its socket, impart ex-
ceriating pain to the patient. In the progress
of the disease, the thigh dwindles away very
much & becomes much smaller that natural
In some instances the shortening of the
Limb does not always take place, for the
head of the bone becomes diseased, as well
as the Acetabulum, and forms an Anchilosis
with the socket, sometimes the socket and
head of the bone, are both wholly removed
and then if you examine, you can pass
a probe thro' into the pelvis. Treatment
Unfortunately we are not often called in the
forming state of the disease. I say unfortunately
for if we are called in, at an early stage of
the disease, it might often be counteracted
when called at an early stage; with a
patient with these symptoms put it from

the arm and Leeches 2d Purge every other day for 3 months. the best purge is cream Tart & Jalap, I should be given so as to produce two evacuations daily, you would suppose that children could not bear so severe a regimen but experience proves that they bear it well Blisters & Issues made with Cantha have been much used, but I have found these ineffectual, I use purges in habits, that are much emaciated neither Have I found any disadvantage to arise from them, but they frequently get fat, It is always necessary to prevent all traction in the Joint, the patient should be put upon a vegetable diet after this a warm bath may be used: I think it is more beneficial when impregnated with Carbonate of Soda or some neutral Salt, I have used salt brine once or twice ~~a day~~ a week. I have mentioned the tumefaction of the Hip because it is from this circumstance it is decided that the disease exists in the hip, the application of Leeches to the part are often effectual, when the ~~disease~~ abscess has arrived to suppuration very little can be done by the Surgeon, the principal thing is to keep open the abscess —

the orifice either with a tent or bougie. If the Constitution be much impaired or weak Louis's are to be used, but if the patient is Corpulent or Robust the antiphlogistic plan must be persisted in, the inflammation attending the disease is seated in the cartilage between the head of the femur and acetabulum

This is a disease which occurs very often to practitioners especially to those who practise in large towns, a very large proportion of your reputation and future emolument depends on your knowledge of this disease. It birth is a matter of dispute among authors, but it is not my intention to examine into the point of controversy. the first account of this disease was in the 16th century its spreads it ravages over Europe, the astonishment and perplexity it produced, cannot be owing to the peculiarity or singularity of this plague but to the manner it was propagated and treated, for we have other ulcers very similar in appearance to the

venereal disease, the venereal disease is pro-
duced

Umbilical Hernia

Danger, of having a lighture around the hernial sac after the contents have been evacuated — Marion

Care should be taken in cutting, the intestine is so thin and the bowels lie upon it also gibraltar division

after cutting with the ~~scissors~~ scissors assist down to the ~~tooth~~ muscle

Ambrose

This clot of Blood as
been about 14 days

Taken a fretie man
by Stole

Ledrax
in Withee